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- Imagine 3.1
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- Amiga repairs – DIY maintenance

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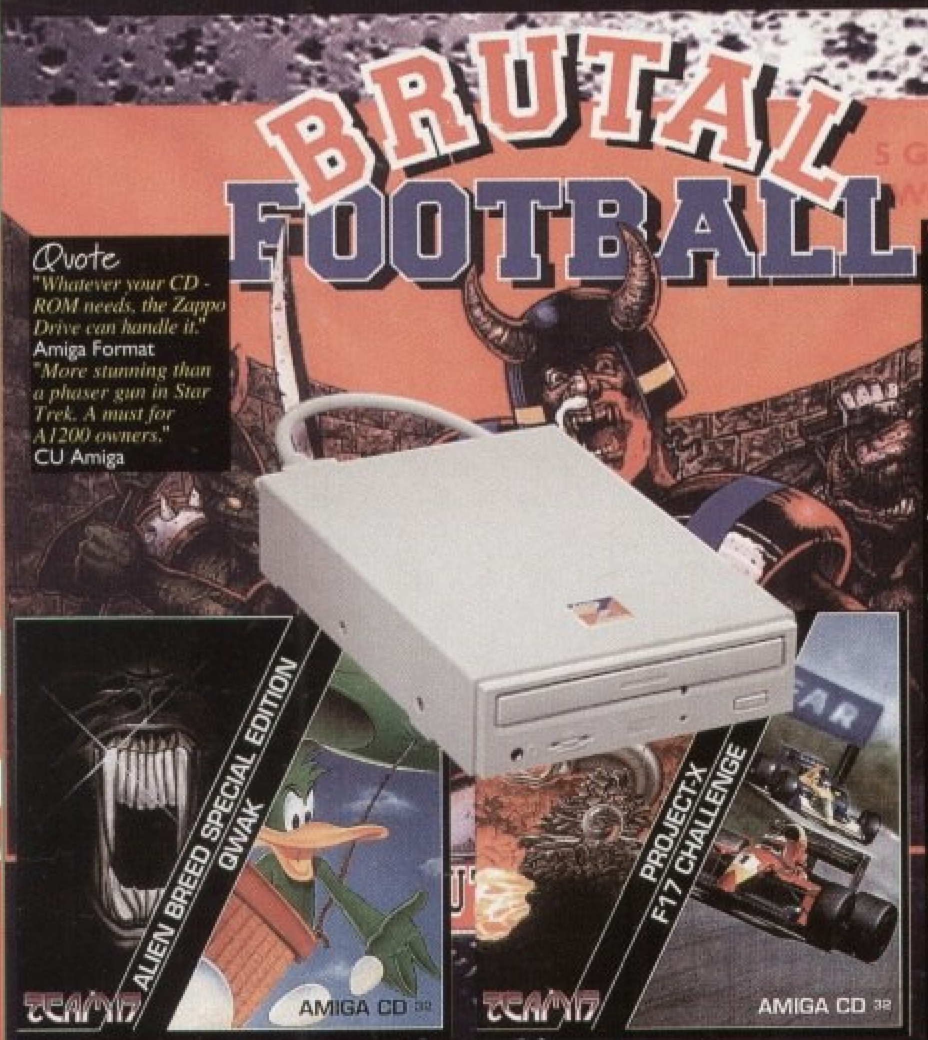
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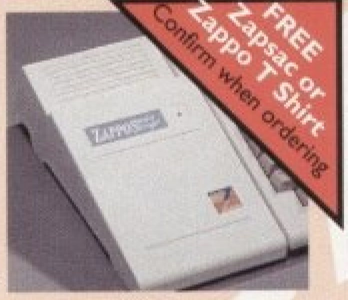
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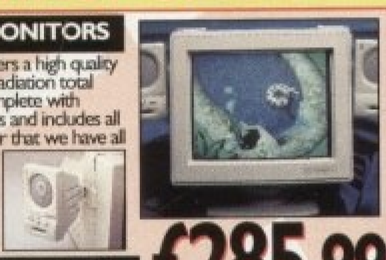
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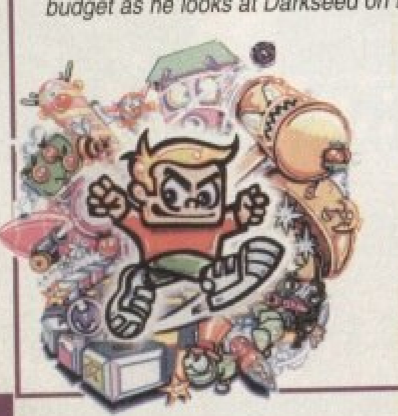
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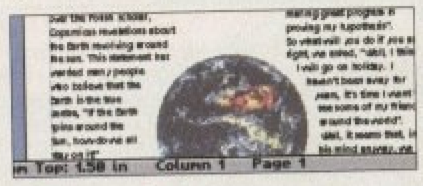
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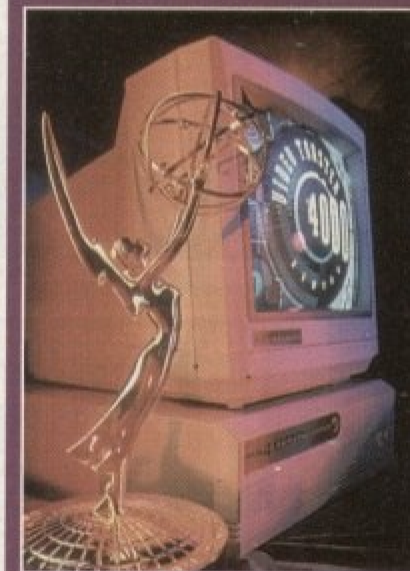
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Next issue on sale 12 January

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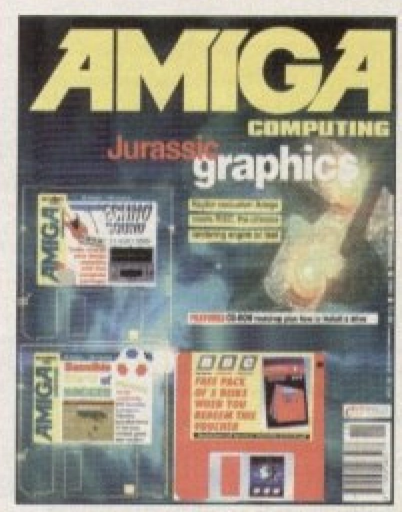


Passport to PAL

The unthinkable has happened. The PAL Video Toaster finally crosses the pond.

See page 33

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Turn to page 90...

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The Coverdisks Page 20



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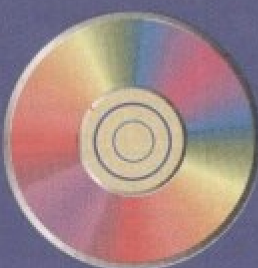
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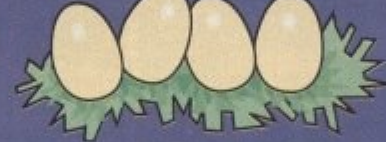
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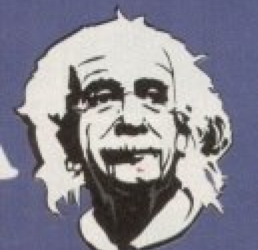
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the neat Squirrel SCSI interface

But there is much more to SCSI than CD-ROM; SCSI is an industry-wide standard which means that you can plug any SCSI external device into the Squirrel interface and daisy-chain units together. *You* have the choice; triple- or quad-speed CD-ROM, 88Mb/270Mb SyQuest™, 1Gb Hard Drive etc. No longer are you forced into a closed solution - with Squirrel, your Amiga will grow with your needs. You will never be hungry for storage again!

Incredibly, the Squirrel SCSI 2 interface costs only £69.95 including VAT and is available now from all good Amiga suppliers or directly from HiSoft.

To complement the SCSI interface we will soon be releasing a number of quality peripherals - initially double-speed & quad-speed CD-ROM drives and 88Mb & 270Mb SyQuest drives; look out for these professional *Squirrel Storage Systems*™ at nutty prices! Phone us for up-to-date details.

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NEWS

By ADAM PHILLIPS

A turn in the Commodore tide – again

Last month, Commodore UK seemed in a surefire position to finalise the first bid. Over the last three weeks this has now changed. Currently, Creative Equipment International, headed by Alex Amor, appears to be the lead contender to make the first bid.

For whatever reason Commodore UK is not commenting on, the near-signed deal with the liquidator has fallen through. Speculation has it that Commodore UK was either unwilling or unable to pay the $1,000,000 non-returnable deposit that is required to secure the first bid.

Whatever the reason, the outcome is that CEI has now manoeuvred itself in to pole position. Alex Amor, while admitting anything could still happen, is confident that he'll finalise the deal and resume production of the Amiga as soon as legally possible.

At the time of going to press CEI, like C=UK, has already experienced delays due to legal tanglings but Monday's deadline (28/11/94) is still hoping to be met if all goes to plan. One of the reasons offered for all the constant setbacks is the lack of an accurate inventory of the government-held stock in the Philippines to determine the real worth of the contract.

Apparently, CEI is working towards a contract that's in the process of being wordsmithed by its lawyers that lets the company pay a definite amount for the technology and a separate, variable amount for parts in the Philippines.

If CEI's bid is accepted it's onto the auction process where the other potential bidders can make their counter bids. "All interested parties will meet in the same room and settle the thing once and for all" commented Alex Amor.

Once all bids have been placed and if CEI tops these, the Amiga technology will belong to CEI. Amor has strong plans for the future and believes that it will able to begin manufacturing again 60 days after the final agreement.

The first batch of 1200s will head straight over to the UK and the rest of Europe, while initial stocks of 4000s will be fed into the US market for potential buyers craving for the Video Toaster system.

The surprise news is that, unlike Commodore UK whose new RISC-based machine would appear after 18 months, CEI intends to release two new machines as soon as possible.

Despite not giving any specific details on the technology involved, Amor promised that the two new computers "will be well suited to the UK market." Indeed, he's very quick to allay any fears that European users may have about an American company exclusively owning Amiga technology.

Amor doesn't see CEI just focusing on the American market and intends to open headquarters in the UK, Germany and the Netherlands. He also plans to employ ex and current Commodore staff in the running of the new business: "There will be a very open approach to the company."

CEI's future plans involve constantly moving technology forward, maintaining price levels at an affordable cost and deeper penetration into the consumer market. Like C=UK, Amor wants to see Amigas as an integral part of any home entertainment system. On the professional side, plans are afoot to make the Amiga surpass the likes of the Pentium and root itself firmly as the computer for animation and film.

Amor wants to see a proper use of marketing to fully extol the virtues of the Amiga's multimedia capabilities. "Commodore UK has always had a marketing problem" said Amor. "Our plans involve advertising in the press, television and various other avenues on a global scale." The question, as always though, is how can CEI afford this?

According to Amor, his silent partner, a large, technological company, is committed to backing the Amiga to the hilt and, if successful with the buyout, Amor claims that the silent partner's name alone "will give the Amiga a lot of credibility."

Any concerns over the already deteriorating Amiga market are met with mixed feelings. Companies such as Scala may well have moved its focus from being exclusively Amiga-based over to other formats as well, but Amor is quick to point out that he believes they are simply waiting to see what happens next. He goes further to state that plans are underway with certain developers to create exclusive packs to establish the Amiga name.

On the other hand, frustration about the customer base is apparent as well. He has been quoted as saying: "I think as every week passes the value of the company goes down. The sad part is that people are forgetting about the Amiga."

Now, an end is in sight in the dim distance but no one is clear when the final answer will rear its head. The most important product-selling season for any manufacturer is upon us and whoever grabs hold of the Amiga reins is going to find the road to financial success a long, uphill struggle.

Allegations shake Commodore

In the midst of the tense buyout negotiations, another crisis has arrived on the doorstep of Commodore UK in the form of allegations concerning returned old stock being sold as new.

Computer Retail News has allegedly come into possession of an internal document that dates back to 1990. Apparently, the contents refer to the time when Commodore and its maintenance company, FMG, drew up an agreement that states all DOA products, 30-day returns and returns from mail order companies should be repaired, repackaged and sold on as new stock.

A former director that talked to the industry paper stated that Commodore must have done tens of thousands of refurbishings for new. All allegations have been strongly denied by both Colin Proudfoot and David Pleasance, joint managing directors of the now defunct company.



Pleasance: Denies "new for old" allegations

NEWS BRIEFS

Amos grows

To aid AMOS users to extend their programming horizons, OTM 2000 has released IntOS which increases the power of AMOS to encompass the ability to code business and utility software.

Costing £29.95, the package includes over 120 commands to utilise the Amiga's Intuition System, the ability to create and use gadgets, windows, screens and menus in the users' own programs and comes with numerous example coding to try for yourself.

For further details, phone OTM 2000 on 0827 312302.

Electronic education

With the educational show, BETT '95, rapidly approaching its opening on the 11th January, Franklin Electronic Publishers, makers of linguistic technology is set to release new and upgraded handheld models of its teaching range.

Appearing at the show will be the Elementary Spellmaster, an electronic aid for dyslexics, special needs and the 7+ reading age. Also on display will be the award winning Language Master, apparently the world's first handheld, fully-speaking electronic dictionary with thesaurus, spellcheck and grammar guide. For more information, call Gerry Kitchen on 071-792 8935.

Brucey books

Continuing with its highly acclaimed set of books on the Amiga computer, Bruce Smith Books is releasing Mastering AmigaDOS-Scripts Programming featuring over 100 scripts programs for both beginners and experts alike.

Included with the book is an offer to obtain a disk containing all the listed coding. To order, phone Mark Webb at BSB on 01923 894355.

Rumbelows Xmas rumble

Punters eager to snap up a CD32 for the New Year can go along to Rumbelows and secure themselves a "buy now, pay later" deal. The high street retail store is also promising some "massive software clearance" with games starting from £4.99.

Star struck for Christmas

Star Micronics, the successful printer company, has unveiled its plans to dominate the printer market this Christmas with the introduction of three new machines.

Aimed at the low-end user with limited cash, the trio are made up of the LC-90 mono retailing at £129, the 24-pin mono Star LC-240 at £149 and the 24-pin colour LC-240C costing £169.

All three printers have built-in automatic sheet feeders, low noise levels and a Amiga-specific driver disk. "This family of dot matrix printers combine the Star brand name for quality with an outstanding price" enthused Annette Tarlton, marketing manager for Star Micronics UK.

For more details about these printers, contact Star on 0494 471111.



Low price printers: Star release three new machines for under £200

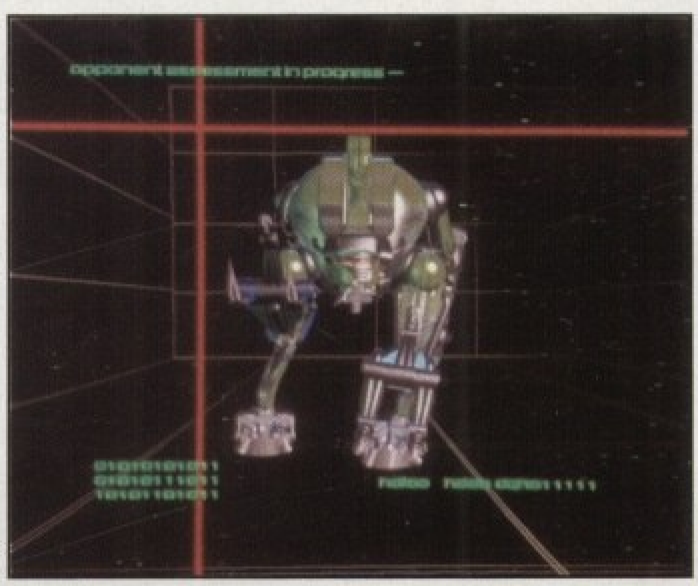
Rise and fall of the robots

As game manufacturers continue their PR efforts to give their games the widest possible exposure, Time Warner Interactive has already had a 60-second commercial advertising Rise Of The Robots banned during religious and children's programmes because of its content.

The commercial features a Mary Whitehouse-like figure who denounces the evil of video games and enthuses about the pastimes during her youth, and then half way through a robot bursts onto the scene with accompanying headlines such as " You can't dance with broken legs" and "Are you religious?"

"This advertising campaign has been designed to make people sit up and take notice" commented Jeff Tawney, marketing manager for the game publisher. "If some people find it offensive, that's tough. Our customers love it."

Catch the commercial on Channel 4 during Eurotrash to make up your own mind.



Rise of the Robots: Causing a fuss off screen as well as on

New A2200 shock!

Just when it seemed there was never going to be a new Amiga released for months, Computer Answers, an American mail order company, has advertised an Amiga 2200 for sale in *Amiga World*.

Don't be fooled into thinking it's an official Commodore release – David Pleasance and Co. haven't developed it.

There are two versions of the machine available to the eager consumer – the A2200-1 and the A2200-2. Version one features a 68-2- CPU running at 14MHz, a FPU socket, 4Mb of RAM (expandable to 10Mb), a 210 hard drive, a double-density floppy drive, a mouse and a keyboard, all coming in at an overall price of $1,199.

Version two comes in two forms – either the 68030 CPU @ 40MHz or the 68882 FPU @ 40MHz model. Included in both is 6Mb RAM (expandable to 128MB), a 420 Mb hard drive, a high-density floppy drive, keyboard and-mouse.

Both of these cost $1,549 and all three come with the Akiko chip built into the motherboard.

Computer Answers has already received 63 pre-paid orders and interest has been very high – a good sign for concerns over faith in consumer interest in Commodore-related machines.

For further details, contact the Canadian-based company on 0101 306 764 5858 or fax them on 0101 306 764 0058.



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ROM SWITCHER BUILT-IN

new



M-TEC EXT.HD

The AT-500 IDE external hard drive for the A500, comes with an internal ROM socket so you switch between a 2.04 and 1.3 ROM without having to open your Amiga casing.

AT-500 BARE	£99.95
AT-500 360MB HD	£259.95

VIDEO BACKUP 3.0

BACKUP FEATURES

Innovative product that allows you to backup your software onto a VHS cassette. You can now fit up to 520MB on a four hour tape. The award winning Video Backup System now has new backup modes for Amigas with a 68020 or a higher CPU, a new user interface that also runs on the Workbench screen, a two times speed improvement over Version 1.5, data compression over three times faster than Version 1.5 and you can also watch television on your 1084s monitor!



VIDEO BACKUP SCART

VBS SCART VERSION	£65
VBS PHONO VERSION	£60
VBS V3.0 UPGRADE	£20

CD-ROM DRIVE



new



OVERDRIVE CD

This external CD-ROM drive comes with the following features: PCMCIA interface, Doublespeed drive, Emulates CD32 CD-ROM device, Multi session and PhotoCD compatible.

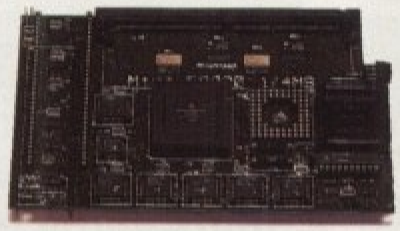
OVERDRIVE CD-ROM	£199
AMINET 3 SHARE	£10
MEETING PEARLS	£10
GOLDFISH	£25
FRESH FISH 6	£25
AUDIO RESOURCE	£23

OVERDRIVE HD

This external PCMCIA Hard Drive allows you to fit a 3.5" IDE hard disk and included in the pack is the installation software which allows you to configure the drive to your own needs.

OVERDRIVE HD BARE	£99
OVERDRIVE HD 360MB	£259

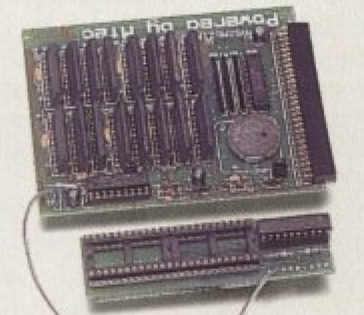
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Trade show moves

Due to the increasing amount of exhibitors at the bi-annual European Computer Trade Show, the exhibition is moving to a new venue next year. Taking the place of the Business Design Centre is the Grand Hall at Olympia.

For businesses interested in attending the next show, to be held between the 26th-28th March, contact Minnie McBride on 081-742 2828.

Bill Gates buys Commodore?

Not exactly. Quasar is all set to release PC Task 3, a software 80286 emulator for Amigas with OS 1.2 or greater and a minimum of 512k RAM.

The package features switchable 8086/80286 emulation, support for up to 16Mb RAM (15MB extended), high-density floppies, CD-ROM support and a host of other facilities.

PC TASK 3 will retail for £79.95 and should be available by the time you read this. More information about this can be obtained from Meridian Software Distribution on 081-543 3500.

Sex - virtually

After last month's article looking at virtual reality sex, news recently broke that US performance artist, Jo Lowery, has created a prototype of the ZyberFantasy Ride. Apparently, global entertainment groups are falling over themselves to lay their hands on the kit priced at $100,000.

If you can't wait for the VR plaything to arrive at UK shores, Lowery expects to have several units set up in various New York nightclubs. He also plans to release a home version in time for Christmas '95. You have been warned.

Emplant and more at World of Amiga

For some time now the entire Amiga world has been waiting for the arrival of the Macintosh and PC emulator board from Blittersoft.

At the forthcoming World of Amiga show in London from the 9th to 12th December, the new system will be unveiled for the first time to potential buyers. Those hoping to buy one though will have to wait for its official release some time after Christmas.

Also on display will be the new Piccolo-SD64 graphics card, Picasso II, FolioWorX, PhotoWorx and the CD32 emulator. For further information, contact Paul Lesurf at Blittersoft on 01908 220196.

Optonica is set to launch two new packages at the show in the shape of Info-Nexus and Data-Nexus. The former is a file and data management system that boasts Envoy networks support. The latter is a multimedia database that includes multiple simultaneous database access controlled via VCR-style controls and a host of other features. Optonica can be reached on 0455 558282.

The Nexus Pro Reference Library CD ROM is also receiving its official unveiling thanks to Videoworld. Containing a combination of well over 1,000 images, sound bites and fonts in varying formats, the company will also be running a competition where either a Zappo or Mitsumi/Tandem CD-ROM drive can be won in a prize draw.

Contact Videoworld on 041-641 1142 for more details.

Macro magic

With its release of the critically acclaimed MovieShop v2 for VLab Motion, Macro Systems of Germany has also announced the arrival of a new software update for the Retina graphics card family.

XiPaint 3.0 has stepped in to replace VDPaint and features an AmigaOS-3.0-style interface that allows simultaneous work on several 24-bit images at the same time.

Also included is the ability to create complex brush storaging, airbrush-controllable contrast/colour, brightness and saturation functions, a very powerful CLUT-based masking with Alpha support and layering with unlimited numbers of image layers. Complete ARexx control is also provided with this update. As well as this, making up part of the pack is Digital Image, an image processor based on the Retina's ability to display 24-bit pictures in standard windows.

This program allows the user to resize pictures and scales the image automatically to the new resolution in real time.

Coupled with conversion and manipulation features, it can also exchange images directly with XiPaint and can digitise video using the VLab software.

For more details about all of the above, you can contact Jorg Sprave at Macro Systems on +49 2302 89177.

More Almathera releases

The Surrey-based Amiga specialists, Almathera, has released the "Amiga Desktop Video CD that's aimed at the amateur and semi-professional video and raytracing market." The CD contains a catalogue of different features – Type-1 fonts in Postscript format and anti-aliased colour fonts have been included for use in video titling, with sizes ranging from 20 to 300 points.

Also, there are more than 150 3D objects that can be used in Lightwave, Sculpt 4D and Imagine, and 100 Mb of textures and backgrounds suitable for Scala and Video Creator.

For serious users of CD-ROM, Almathera is distributing the Nakamichi MBR-7 CD Drive Jukebox that enables seven CDs to be loaded into it and then controlled via the Amiga. The company claims that the Jukebox will work with most modern SCSI controllers and for more details, contact Bruno Sajno on 081-687 0040.



Jukebox: Enables the use of seven CDs on a single Amiga without any changing over manually

The world's fastest Amiga

The Cologne Show revealed the Cyberstorm 060/50 accelerator for the Amiga 4000, making the display machine the quickest on the planet. At present, Phase 5 Digital Products are shipping the 68040/40 version but this latest addition offers a performance approximately four times quicker than a 4000/040 and has full System 3.0/3.1 compatibility. The CyberStorm 060/50 will be making its way across to the UK in February '95 and further increases in speed will see 66MHz and 80 MHz versions of the 68060 CPU Modules appearing in late '95.

Another release from the German-based firm is CyberVision 64, a high speed graphics board for all Zorro-III Amigas. It features a 64-bit graphics engine/blitter, 2 Mb of Video RAM and a 135MHz Video-DAC that allows resolutions of up to 1280*1024 in 8-bit colour mode or, alternatively, 800*600 in 24-bit colour mode.

The CyberVision was on display at the Gordon Harwood stand at the World of Amiga Show and will be shipping officially in February costing £299.

Before the downfall



With all the upheaval in Commodore's life, you may be wandering why it all happened. Denny Atkin reveals two products that show you a behind the scenes look at exactly what went on

Intangible Assets Manufacturing has released two new products from Dave Haynie, whiz Amiga hardware designer, that are must-haves for any Amiga user. Die-hard Amiga fans will find 'The Deathbed Vigil'... and 'Other Tales of Digital Angst,' Haynie's video, to be an interesting look behind the scenes at the last days of Commodore.

Tour the West Chester halls on the day of the massive layoffs that preceded the final closing of the company, and meet many of the people who made the Amiga the great machine it is today. Follow the group to the closing-day party at Margarita's bar, and then to a raucous final get-together, complete with stories of DevCon antics, company pranks, and the burning of certain despised executives in effigy.

The tape is a fascinatingly intimate journey into the ranks of former Commodorians during their last days – you may feel a bit guilty getting this close to such emotional moments.

If you've followed the goings-on at Commodore over the years, this tape is a must-have and a rare opportunity to be able to put faces behind many of the names you've heard over the years. The cost is $35 for an NTSC tape, $40 for PAL, and it's worth every penny.

Perhaps not as much fun, but a bit more useful, is the new DiskSalv 3. Haynie's shareware disk-rescue product has gone commercial, adding a revamped user interface and many new data-recovery features. The most obvious change is the new font-sensitive user interface, complete with graphical queues, context-sensitive help, and drag-and-drop device selection.

More important are the new disk salvage procedures. A new check mode lets you look for problems without actually making any repairs, just to make certain that your data is shipshape. You can also use DiskSalv 3 to back up your data (full or incremental). And DiskSalv can work in reverse if you need to be certain that data that you want fully eliminated from a disk (credit card info, letters to ex-girlfriends, and so on) has been removed by completely wiping all information left from deleted directories, files, and data.

Pattern matching and filtering have been improved, and buffered file I/O and an intelligent prefetching disk cache make DiskSalv 3 faster than previous releases. Undeletes can often be performed in-place, dramatically speeding that operation. You can have all of this for $40, money you know is well spent if you've ever lost hours of work to a disk error.

IAM also distributes the book Connect Your Amiga!, reviewed in an earlier instalment of this column, and the Envoy networking system. The Pennsylvania-based company has now set up UK distribution through Almathera Systems and can be contacted on 081-687 0040, fax 081-687 0490, or e-mail at almathera@cix.compulink.co.uk.

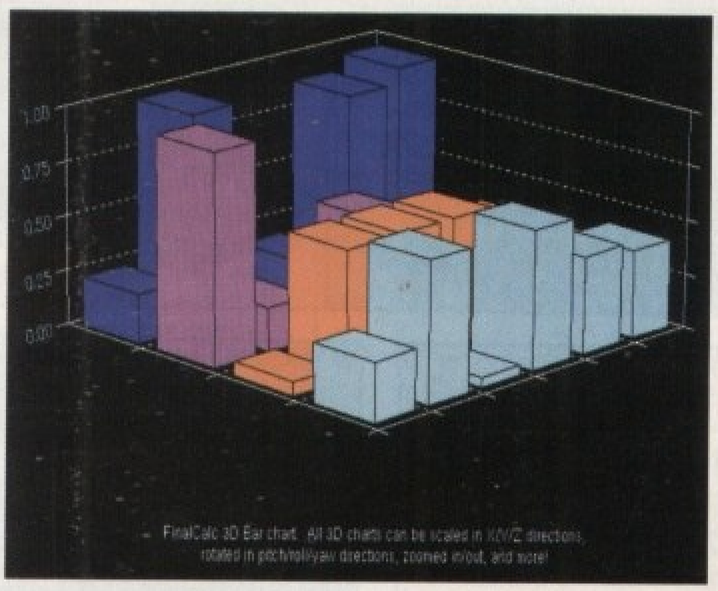
Stiff competition

Over the years you may have heard that ace Amiga shareware developer Khalid Alderosi has been working on an Amiga spreadsheet good enough to compete with the top spreadsheets available for Windows machines. The product is finally near completion, and will be released "in the first part of 1995" from Arizona-based SoftWood.

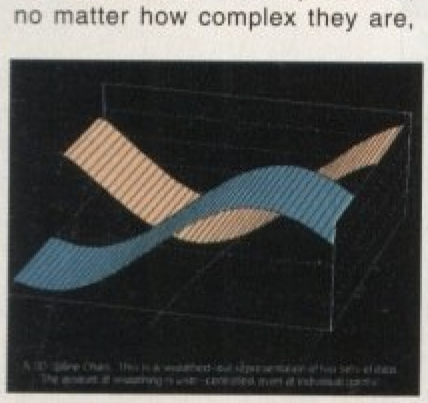
It uses a revolutionary 'natural recalc' engine that Alderosi says is significantly more powerful than the current generation of spreadsheets. Formulas are always evaluated in the order of their interdependence, no matter how complex they are, and recalculation always runs in the background, so you're never waiting for Final Calc to compute results.

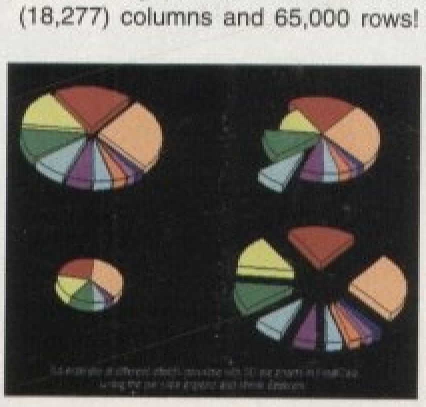
Alderosi says the program's functions are a superset of those found in 1-2-3. You'll even find lots of statistical functions, including standard deviation, standard deviation of a sample population, variance, least squares: alpha, beta, correlation and covariance, plus lots more.

The program is far more than three-dimensional: It allows up to 254 linked sheets per project, each containing a maximum of ZZZ (18,277) columns and 65,000 rows!



Just one example of the 3D charts and graphs available





The government could probably balance its budget with those kinds of capabilities.

The user interface is designed to be both easy to use as well as power-user friendly and everything can be accessed using the mouse or keyboard hotkeys. The user interface can come up in any screen mode and use any Amiga font, and fonts and resolution can be changed on the fly. Final Calc supports Preferences printers as well as PostScript, and unlike previous Amiga spreadsheets, uses scaleable outline fonts to give presentation-quality printouts.

There's lots more here, including 2D and 3D graphs (see accompanying illustrations) and more than 630 ARexx/script commands. UK users can purchase SoftWood products through SoftWood Products Europe, New Street, Alfreton, Derbyshire DE55 7BP; Tel: 01773 521606, Fax: 01773 831040.

Stranger than fiction



Paul Austin documents the bizarre situation that's keeping the Amiga on its knees

One of the occasional perks involved in editing *Amiga Computing* is the odd trip abroad to attend shows such as the recent Amiga Expo in Cologne.

In normal circumstances this particular trip is an absolute must for anyone hoping to document the latest and best in Amiga technology.

However, with the cloud of the Commodore demise still hovering over the entire industry, I admit to having harboured some reservations about the usefulness of this normally essential trip.

After all, a total lack of Amiga's world-wide logic would suggest a show renowned for spotlighting the latest high-end releases would be the first to suffer from the ongoing corporate capers.

With this in mind I booked the flight at the last minute, fully expecting a fairly disappointing trip. However, on arrival my reservations were soon dispelled.

In fact the Saturday of the show was so busy I was forced back to hotel by mid-morning, as what must have approached 50,000 punters brought the huge show hall to a complete standstill – I returned in the afternoon.

Even last year's show seemed tame in comparison, and only by late afternoon was it possible to battle through the masses and talk to the men and women behind an impressive collection of new releases.

Leading lights included VLab Motion from MacroSystem, the CyberStorm 40MHz 040 and 50Mhz 060 accelerators from Advanced Systems, plus a profusion of new graphics cards, Mpeg encoding systems and build-your-own tower kits from a collection of third-party manufacturers. Wandering amidst the hoards of punters and new products, it seemed difficult to believe the Amiga was on its knees. However, after talking to those in the know, the reality of the situation soon reared its increasingly ugly mug.

According to one well-travelled dealer, A4000's are now trading in the States for up to $4000 a time. Remember that's trade, not retail.

The same desperation has been echoed back home in recent weeks as countless calls flooded in from professionals and punters alike, all frantically searching for machines.

And what are the so-called saviours of the Amiga doing while those who've made the machine so special are screaming for a solution, not to mention some stability?

In short, bugger all. Latest reports allege that Commodore UK – alias Amiga International – either can't or won't provide the necessary $1,0000000 plus – non-returnable – deposit required to complete its initial bid for what remains of the now defunct CBM empire. If it couldn't manage the preliminaries, why have we been subjected to endless breast-beating for months on end?

Mr Pleasance and Co. even had the gall to invite the unwashed masses of the industry to a re-launch party – which of course was subsequently cancelled at the last minute.

Now thanks to the latest corporate interuptous, the whole deal appears to be back to square one with Creative Equipment International of Miami lining up to make the first official bid.

If they succeed though the deal is far from over. Thanks to a bidding process insisted upon by Commodore's creditors, this is only the first step on the road to a sale.

After the first bid is in, all other interested parties have 30 days to make counter proposals. At which point such familiar names as Samsung, Phillips, Amstrad, Escom AG and of course Commodore UK – alias Messrs Pleasance and Proudfoot – can put its financial case to the Bahamian Supreme Court.

After all bids are in – and assuming the original has been improved upon – CEI will have a final opportunity to out-bid the best offer tabled by the opposition.

If it outbids all existing bids the horse trading will be brought to a close, if not the assets obviously go to the highest bidder. Basically, CEI has the first and final say, after which no more offers will be accepted.

This ridiculously long-winded procedure is without doubt one of the main causes for the horrendous delay in the sale of assets, coupled with the inventory problems in the Phillipines.

Creative Equipment President, Alex Amor, has already stated that CEI has always been the highest bidder and has simply been waiting for the UK management team to make its bid – at which point its terms would be known and subsequently beaten in the court.

Although Commodore UK has not offered a reason for its failure to make the initial signing, I'm sure it'll claim a tactical withdrawal in an attempt to beat Creative Equipment at its own game.

All very cloak and dagger isn't it. However, while the various camps continue to prowl the financial shadows like hyenas stalking an injured prey, the Amiga is slowly but surely slipping into obscurity.

Paul Austin
Editor

Testaments of time

As you read this article, more and more companies are shelving their Amiga development while the weaker distributors and retailers go to the wall.

It's a sad testament to the perverseness of the situation that while people are screaming for machines and developers beg for all and any news, the buyers seem happy to sit back and do nothing while their prize loses the one thing that gives it any worth – the loyalty of those who create for it, and with it.

Lets hope common sense will prevail before the greed of creditors, liquidators and investors turn an elegant and unique machine into yet another soon-to-be-forgotten technological curiosity.

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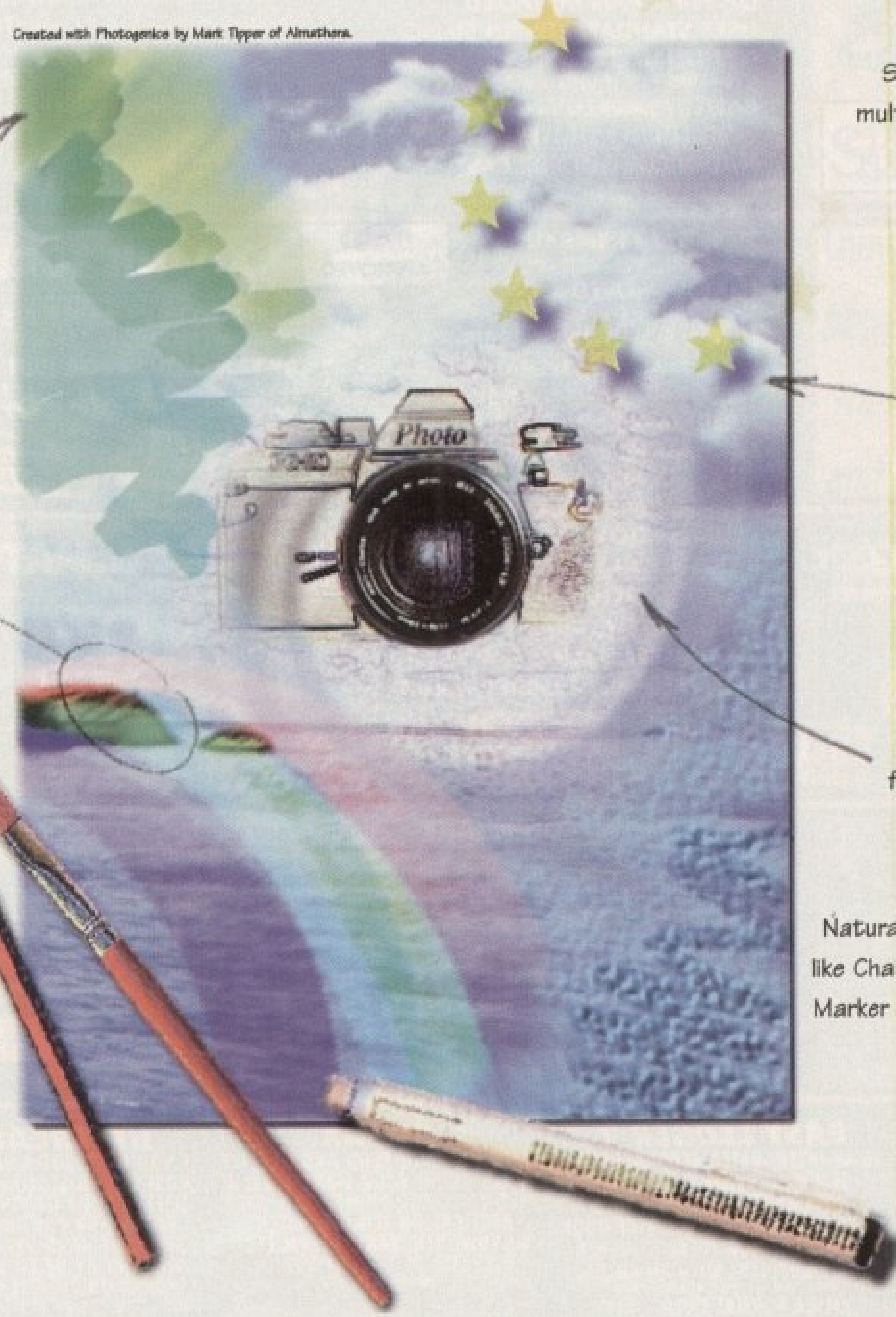
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getting started



The Amiga Computing CoverDisk is designed to be as simple to use as possible. Follow these instructions and you'll be up and running in no time!

De-archiving applications - Workbench 2.0 and above

Always boot from your CoverDisk when de-archiving applications. The installer programs can be located via the install icon with the appropriate name in the WB_2&3_Only drawer.

The de-archiving procedure has been much improved and now combines the power of the official Commodore installer program with that of Workbench 2.0 and 3.0.

The installer program is designed to be powerful yet simple for the beginner and features a user-friendly interface allowing you to de-archive programs with a minimum amount of fuss. The installer programs for Workbench 2 and 3 users can be located via the icons named:

```
Install[program name]
```

eg:

```
InstallPFM
```

To run, simply double click on the icon which will load up the installer program.

Using the installer

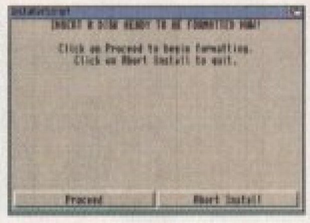
Ignore the buttons that appear when the installer program boots up and simply click on the Proceed button. The program will then copy the necessary files to RAM.

Once this has finished it will inform you that it is about to format a disk in DF0. Click on Proceed, at which point you will be told to insert a blank disk ready for formatting.

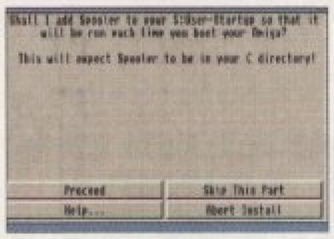
Once you have clicked on Proceed, the installer will indicate that it is formatting the disk in DF0. When this has finished, click on Proceed again to start the de-archiving procedure. When the application has been de-archived you will be told where the de-archived files are. Click once again on Proceed to finish.

If at any time you are unsure as to whether you want to continue installing, you can click on the Abort Install button.

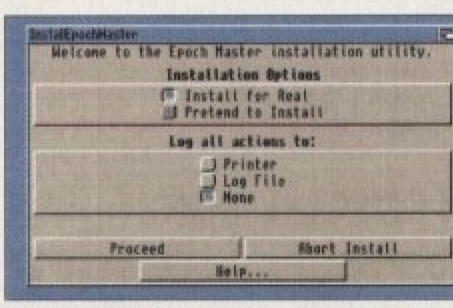
Occasionally, utilities may need to add instructions to your User-Startup file located in the S directory so that they will function correctly. If you want to add the instructions, click on Proceed when prompted.



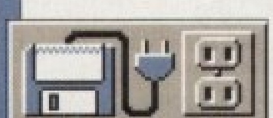
Don't forget to insert a blank disk at the prompt and before pressing Proceed



Any commands that need to be added to your User-Startup can be done with the press of a button



Don't worry about the installer options. Simply click on the Proceed button



The Workbench 2.0 and 3.0 installer icon

The Files drawer contains all the utilities set up so that you can use them from the CoverDisk. A Games drawer is also provided so that you can play these immediately. If you want to install the games make sure you copy all the necessary files across as listed in the CoverDisk pages.

We have now managed to fix the problem with AmigaDOS displaying a "disk is write protected" requester when a write-enabled disk is inserted. Just make sure you insert a blank disk when the installer programs tell you – and not before or after.

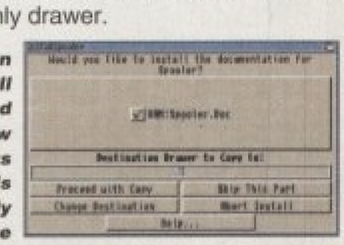
Installing utilities

The procedure for installing utilities is much the same as installing applications, except that you can boot from your hard drive or Workbench disk. As utilities don't need to be de-archived, you are asked to specify a directory on your hard drive or Workbench disk where you would like to install them.

If you don't want to install to the default directory you can change it by clicking on Change Destination. The Show Drives button will allow you to select a new device and directory. You can create a new drawer for your utility to go in by clicking on the Make New Drawer button and typing in the name.

You can also make a utilities disk by running the MakeUtilitiesDisk1.3 program located in the WB_1.3_only drawer and installing your utilities to here. At times you may be asked if you want to install a utility's documentation. A tick box indicates that the documentation is selected for inclusion, but you can click on the box to ignore it or simply click on the Skip This Part button.

The utility installer programs can be found in the appropriate program drawer in the WB_2&3_Only drawer.



You can easily install documents and create new drawer thanks to the installer's user-friendly interface

De-archiving applications - Workbench 1.3

Always boot from your CoverDisk when de-archiving applications. The installer programs can be located via the install icon with the appropriate name in the WB_1.3_Only drawer.

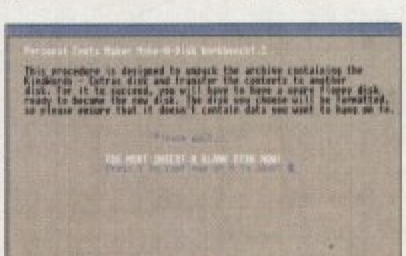
```
Install[program name]_1.3
```

eg:

```
InstallPFM_1.3
```

When you load up the 1.3 installer the program will first prepare itself ready to de-archive the program to a blank disk(s). You will then be asked to insert a disk to be formatted into DF0 and either press y to continue or n to abort.

Provided you answer y, the disk you insert will be formatted and the application de-archived.



After inserting a blank disk press y to continue or "n" to abort

Installing utilities

You should first run the MakeUtilitiesDisk_1.3 to format a blank disk called ACUtilities which will be used to store any utilities you eventually install.

This disk can be used with future CoverDisk utilities until it becomes full. The MakeUtilitiesDisk1.3 program will be a permanent feature of the CoverDisk.

To install any utilities, boot your machine with your CoverDisk inserted in DF0. Utilities can be installed by clicking on their install icon found in the appropriate drawer in the WB_1.3_Only drawer. You cannot specify their destination and any additions to the Startup-Sequence must be done manually.

When installed the utilities are copied to a drawer called ACUtils on the ACUtilities disk.



THE Cover

You CanDo too!

CanDo v2.0, from Innovatronics, is a revolutionary software authoring system for the Amiga which allows you to create your own Amiga software without any programming experience.

To help you create your software, CanDo provides a friendly and easy-to-use system which utilises the full power of the Amiga's sophisticated operating system without requiring expert technical knowledge on your part. It also makes it easy to use the basic components of any program such as graphics, sound, animation and text, to make your software look and sound great.

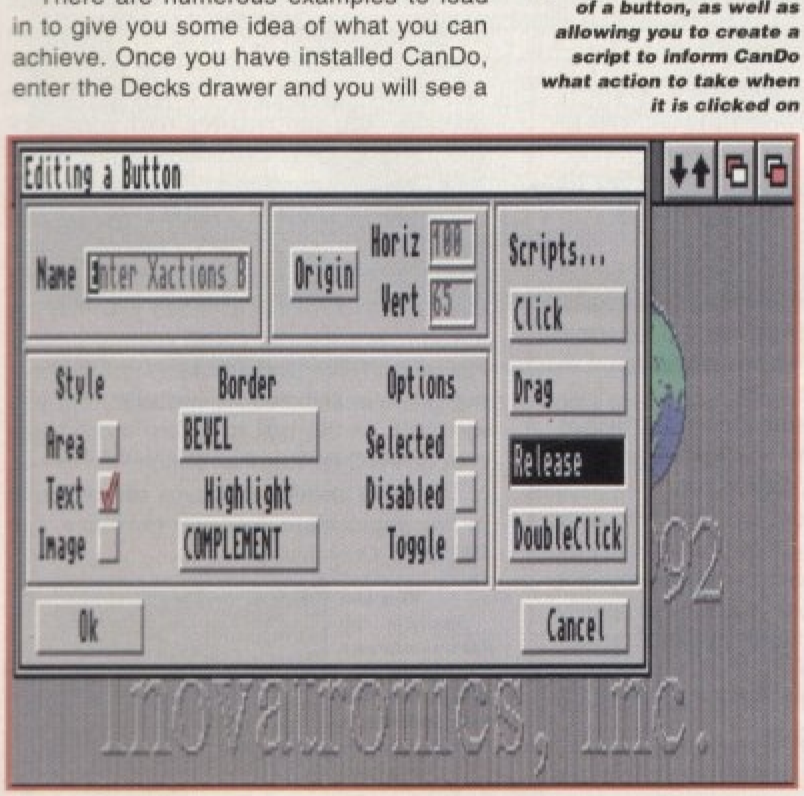
You can create standalone applications which can be given to friends or even sold for profit without the need for expensive licenses or fees.

Like most great programs, CanDo is as powerful as it is easy to use. It can be used to create simple slide shows and interactive presentations to animated multimedia productions, quality educational software and even sophisticated control applications that communicate with external video and audio equipment.

There are numerous examples to load in to give you some idea of what you can achieve. Once you have installed CanDo, enter the Decks drawer and you will see a number of drawers and icons. The icons that have images of a stack of cards on them are actually CanDo source files.

To get a taste of exactly what you can achieve with CanDo, check out the examples within the MoreExamples and ComplexExamples drawers on the disk. Simply double-click on the icons and the programs will run. The MorExamples drawer contains an example file called WhatIsCanDo, which, when run, will go through an interactive demo describing exactly what CanDo can do (no pun intended) with animated examples, and is a good place to start.

The button editor lets you specify the type and style of a button, as well as allowing you to create a script to inform CanDo what action to take when it is clicked on



RESOLUTIONS

You should bear in mind that some of the examples may be discoloured and text may be unreadable if you are in one of the higher resolutions available with AGA machines, so drop down to low resolution if needed.

Once you have CanDo up and running, you can load the example source files and examine how they are structured. To do this, hold down the left mouse button to access the menu in the lower toolbar area at the bottom of the screen. From this menu, select the Open selection from the Deck menu item. A file requester will then appear, allowing you to choose an example file.

Once the example file is loaded, it will appear in its own window and you can start using it. You might want to click on the CanDo tool box arrows (top right) – this will scroll the box down so that you can see more of the screen.

To give you some idea of just what goes into creating an application, we'll go through a simple tutorial to create a card, the basic building block of all CanDo applications.

Each card can be designed to convey different types of information – it can be text, graphics, animation or sound. Your job is to create objects on the card which allow the user to interact with the application. This is achieved using such objects as buttons, sliders and menus.

A typical CanDo project will consist of many cards and as such, the user must be able to switch between cards. A collection of CanDo cards is generally called, appropriately enough, a Deck.

CanDo overview

CanDo applications are comprised of a deck of cards and you can have as many cards within your application as you wish. Each of the cards in a deck has a window. These cards can be displayed on screen one at a time.

Just what the card looks like is entirely down to your designs. CanDo provides a multitude of graphics and objects, such as buttons and sliders, that allow you to construct cards which a user can interact with.

The objects on each card allow a user to control an application, allowing such actions as entering data, selecting from a range of choices, confirming choices and accessing menus.

What you need to do, as the creator of the CanDo application, is decide just how the cards are designed and what actions a user can perform when using your application.

Some of applications which you can create with CanDo are multimedia presentations and reference software, using low-cost sound digitisers and video grabbers such as Stereo Master and VideoMaster to create the sounds and animations. The only limit is your imagination.

-Disks

Create your own software with this complete and unrestricted software authoring tool from INOVAtronics

This is simply a number of cards which form your complete CanDo program.

Click on the window icon and the Window Editor will appear. This allows you to set up the attributes associated with the window such as its name, width, height, and its colour, among other things. Click on the window title box and replace the default text to My Window. Next, click on the Dimension button. As you can see, you can set the windows size, number of colours, position and also load a background picture.

Click on the button titles Unnamed under the word Picture. CanDo will now display a file requester allowing you to select a picture.

You can also preview the selected picture prior to confirming it as your final choice. Select each picture filename in the rightmost window and click on the Show Picture button. As you can see, the selected picture is displayed on screen. Once you've had a quick peek, click a mouse button to return to the requester.

Select the BACKDROP1.PIC file and click on OK. You should now see that the dimension box shows the file BACKDROP1.PIC as the window's chosen picture. The size and number of colours for the window are automatically selected depending on the colours and size of the chosen picture.

Click on OK and you are taken back to the Window Editor. Click on OK again and you are back at the main screen, complete with your window showing the picture you selected.

Now let's add a button. Under the collection of icons called Objects, click on the Add button. This is the mode which lets you add objects to your window. The corresponding Edit button puts you in the mode which allows you to Edit existing objects which you have previously added.

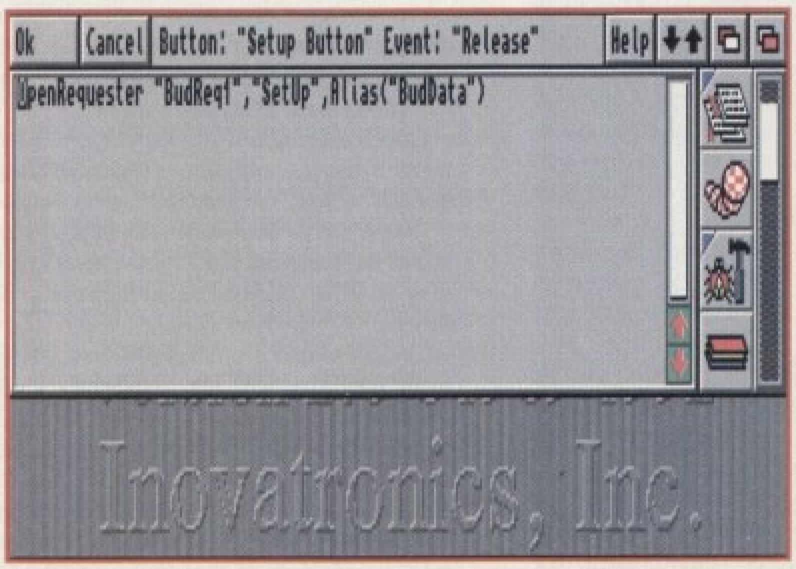
SPECIFICATION

Next, click on the Button icon. You will now be asked to specify the location and size of the button. Click on OK then move the mouse onto the window. As you can see, crosshairs now appear, along with numeric co-ordinates which change as you move the mouse.

This allows you to accurately position your object. To do so, move the crosshairs until you are at your required position, then click and hold down the left mouse button.

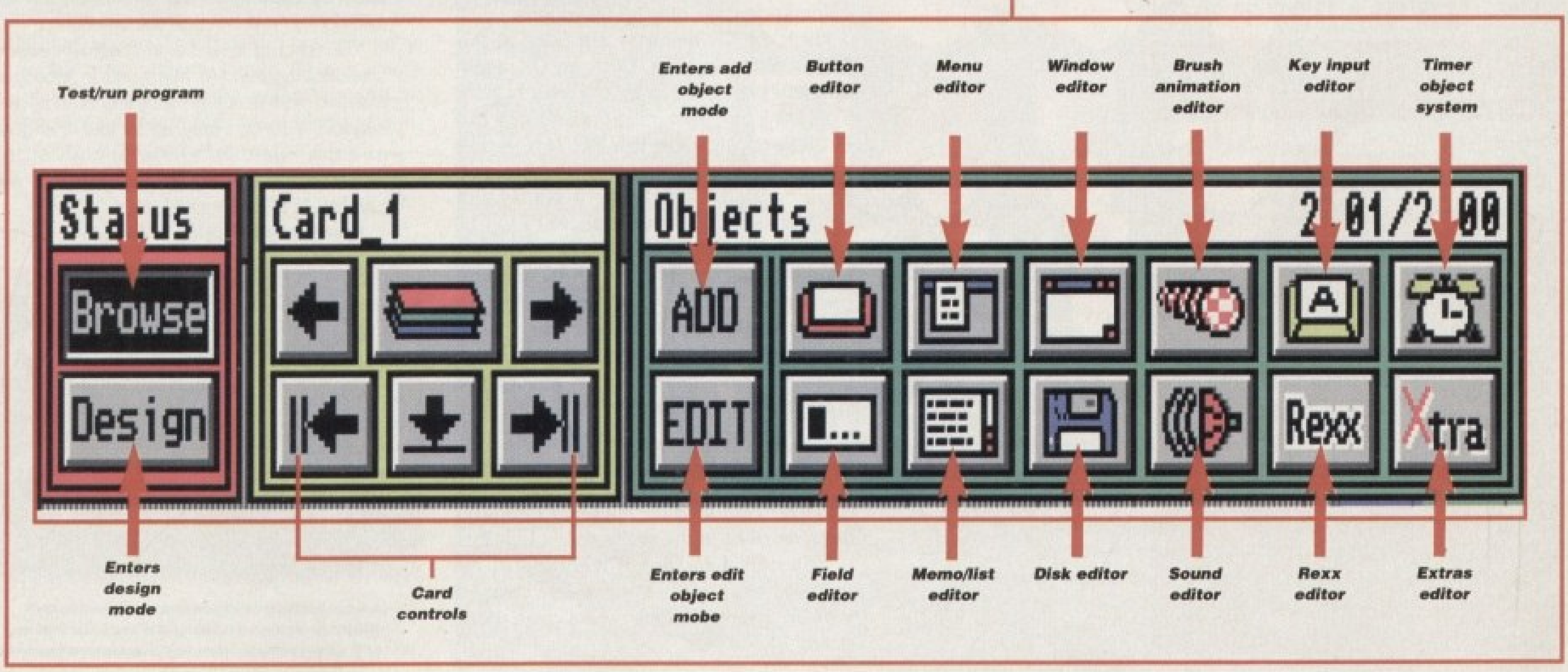
This sets the origin for your button. With the mouse button held down, moving your mouse enables you to draw a box, along with more numeric coordinates showing the size of the button in pixels. When your button is the size you want it, release the mouse button.

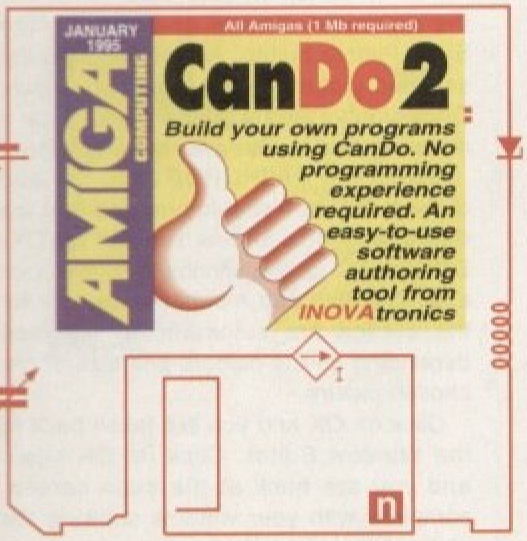
You are now taken to the Button Editor ➤



This is the script editor where you create instructions for various actions such as clicking on a button or selecting a particular menu item

CanDo grab info





screen. Here you can choose how your button looks, whether it is activated with a double-click or single-click and whether it has a name, as well as decide what action will be taken when it is selected.

Click in the Name box and replace the text with My Button. The Bevel and Highlight buttons allow you to define the style and look of your button.

Buttons are no use if they don't do something when you click on them, so let's make it print a message when it's selected. Click on the Click button under Scripts and you will be taken to the Script Editor.

This is where CanDo's real power lies. Here, you can create scripts which perform a variety of actions. We are interested in displaying a message so we need to tell CanDo to do just that.

COMMANDS

CanDo has a host of powerful commands that allow you to perform many tasks, such as playing an animation or sound file, drawing graphics, opening file requesters and many other actions.

To the far right, you will see a scrollable window containing lots of icons. These are a collection of the most commonly used actions that are found in typical applications. The one we want is the print text icon.

Move the slider down until the icon with the large letter A scrolls into view. This is the print text icon, so click on it. The print text requester appears. Click on Set Text and Font.

In the requester box that appears, choose a text font, style and size and in the text field, type: "The button got clicked" and press return. Notice the example text which appears in a window.

This shows what it will look like when it's printed. Click on the OK button to return to the Print Text requester and click on the Set Position button. The Script Editor will appear, allowing you to position a rectangle the size and shape of your text. Position the rectangle where you want and click the mouse button.

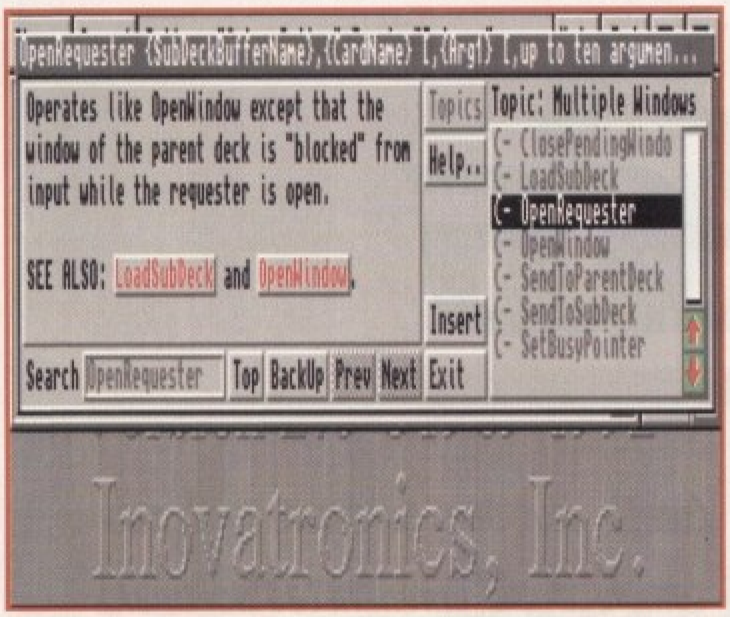
You should now be back at the Script Editor and as you can see, a script has been automatically created with the commands to display a text window.

Click on OK and you are back at the Button Editor screen. Click on OK again and you are ready to try out your button. To test your new objects, select the Browse button on the far left – this allows you to try out the objects you have created. Click on your button and you will see the message appear.

As you can see, CanDo is very intuitive and easy to use, utilising icons and pre-defined scripts to make creating an application easier than traditional programming techniques.

If you think that CanDo is exactly the type of program you need to create your own software, then check out Page 26 for details on how to get hold of version 2.5 of CanDo, including the 428-page manual. This version contains new and even more powerful features.

You can also take advantage of an upgrade offer to the soon-to-be-released version 3 for users who want even more power and versatility.



Double-clicking on any command displayed in the script editor activates CanDo's comprehesnive and context-sensitive help system, which describes the particular command you clicked on

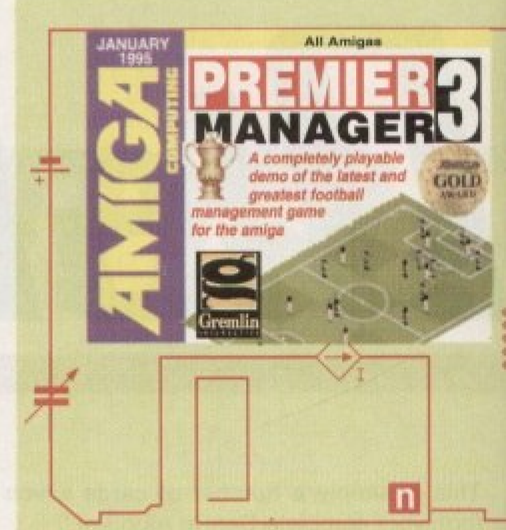
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Considering the huge popularity of football, it's hardly surprising that the computerised versions of it are nearly always found at, or near, the top of the computer charts every month.

There are two types of football games available for the fanatic, the arcade type, which allows you to control the players in their matches, and the strategic alternatives, which simulates the role of the football manager.

Gremlin's latest footy game fits into the category of the latter type and got a hefty 80 per cent and Amiga Gold Award in the Christmas issue of System.

Now, courtesy of Gremlin, you can get a taste of just how playable this superb game actually is with the playable demo version on this month's CoverDisk. So, control your excitement and put the Premier Manager 3 disk in your disk drive and reset your Amiga.

Once the game has loaded, you will be faced with a screen with two panels. Click on one of them and a dotted line will appear. You can now type in your name, after which you should press return.

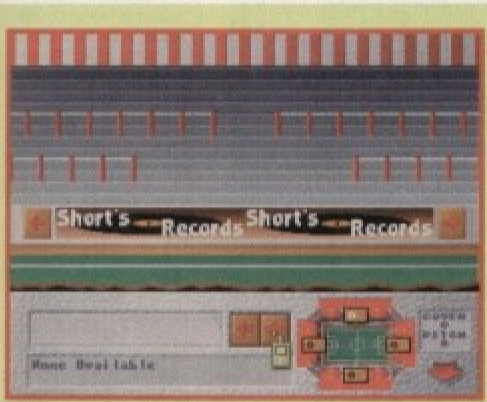
The name of a Conference League team now appears so you can select a different team by clicking on the arrows on the left and right to flick through the selections.

You should now be at the pre-season friendlies screen. At this point in time you are two weeks away from the start of the season. You can play up to four friendlies and the numbers at the bottom of the screen represent the dates on which you can play a friendly game.

If you wish to play a friendly, simply



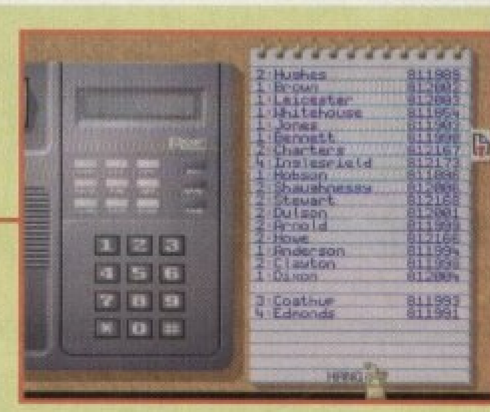
A new feature in Premier Manager 3 is the ability to assign tedious jobs such as training and sponsor selection to an assistant manager



Supplement your club's income by signing up sponsors to advertise on the pitch level sponsor boards



The tactics screen is where the all important strategic planning comes in. Bad decisions here may cost you an important match


The phone allows you to get in touch with other clubs and players to do such things as buying and firing

Manager mania

Take your team to the top in this playable demo of Gremlin Interactive's fantastic footy game

select a number and then choose a team to play against from the list above. When finished, click on the On/Off button in the bottom right of the screen.

Next to the numbers at the bottom of the screen are the icons for you to view the fixtures and current teams, allowing you to check upon forthcoming matches and your team's current status.

If you intend to play more than one friendly, be sure to select the other numbers and an opposing team before clicking on the On/Off button. Playing friendlies is useful for checking out your squad before the season starts, allowing you to make any fine tuning to the team before the big games.

Of course, the other side of the coin is that you won't make any money from playing friendlies away from home and you also run the risk of injuries, as well as players being sent off before the season even starts.

Once you have made your selections and clicked on the On/Off button, you are taken to the main options screen. This is where you can access all the areas required for managing a team (see Main Menu screenshot for a description of the icons.

So, get your manager's head on and get down to the serious business of getting your team to the top of the league.


Once the game starts, you are treated to a view of the pitch with your players madly running around trying to score (a goal that is)

Main menu icons

1. Save game – this is disabled in this demo version, so save up your cash and go and buy the complete game. It's worth it

2. Game options – this icon allows you to tailor the way Premier Manager looks and what amount of information you receive, such as League or Cup reports, as well as change the graphics and sound to your tastes

3. Transfer Market – this is where you can off-load the dismal players in your team and bring in new talent to strengthen your squad. As the football season progresses, you will notice that fewer players bcome available so good judgement is required.

4. Ground improvements – rather than being a luxury, ground improvements are now a necessity. For instance, spending cash on extra seating will bring in extra cash at the gate, but is it best spent on a top player to get better team results? The decision is yours



5. Sponsorship – you've all seen those advertising boards surrounding the pitch at matches. Well, this is another crucial form of getting extra revenue to spend on your club. This screen allows you to sort out who advertises and how much they are prepared to spend

6. Team selection – the all-important section where you can review, change and generally control your team. It's where you will decide what tactics to use, who will play in which position and also allows you to check out individual players' skills, statistics and, god forbid, any injuries.

7. Managers history – where you get a complete rundown on your performance, as well as a detailed history on League and Cup tables

8. Business case – you can't do a good job without good staff and this is where you can hire and fire staff members who join the club. Some of the team members you deal with include trainers and scouts, as well as allowing you to arrange for insurance on players and what particular skills they are to improve on through further training

9. Telephone – here you can contact players and other clubs to loan, buy or, if you're feeling particularly ruthless and a team member is not performing up to scratch, sack a player

10. League tables – this is where you can get the low down on your team, ground and referees. Statistics galore adorn the screen, giving you a detailed account of how well your club is doing.

11. The Cups – all the information on forthcoming Cup matches can be found here. Each competition has its own icon. Starting from left to right you have the FA Cup, League Cup, European Cup, Cup Winners Cup, UEFA and the Charity Cup

12. Fax machine – news updates and information on grants, fines, injuries, transfers, offers and (booo, hisss) tax bills are on view courtesy of this particular menu

13. Club finances – you can't get away from it. In the end, money matters when you are running a club and this is where you will find out how much wonga you have coming in, as well as the debts incurred for buying players and spending money on the ground

14. Play game – once you've got all the fiddly business matters, team organisation and tactics sorted, click on here to enter the match proper. Here you watch your team go through their paces against the opposing team, hopefully scoring goals and avoiding injuries. At half time, you also have the opportunity to change your tactics

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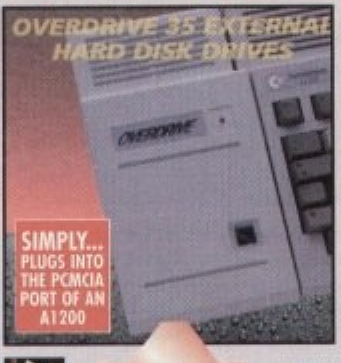
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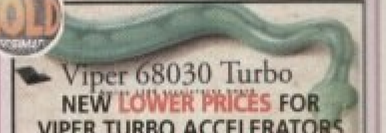
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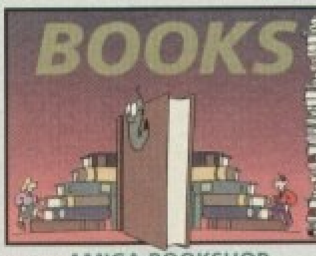
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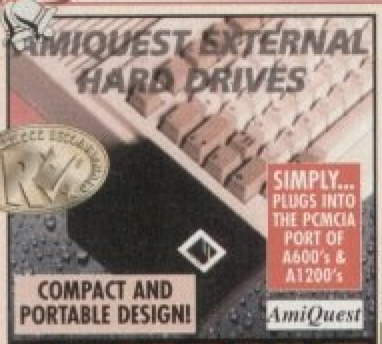
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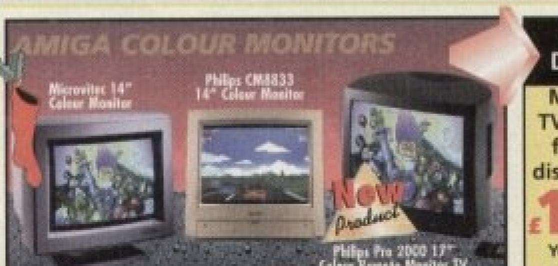
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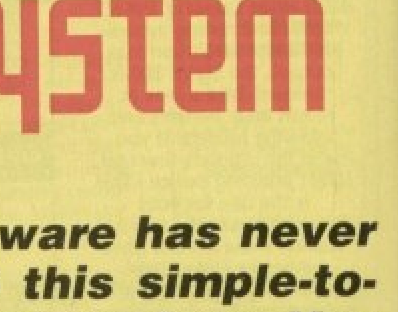
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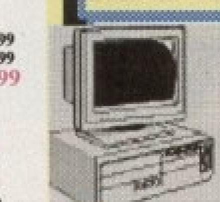
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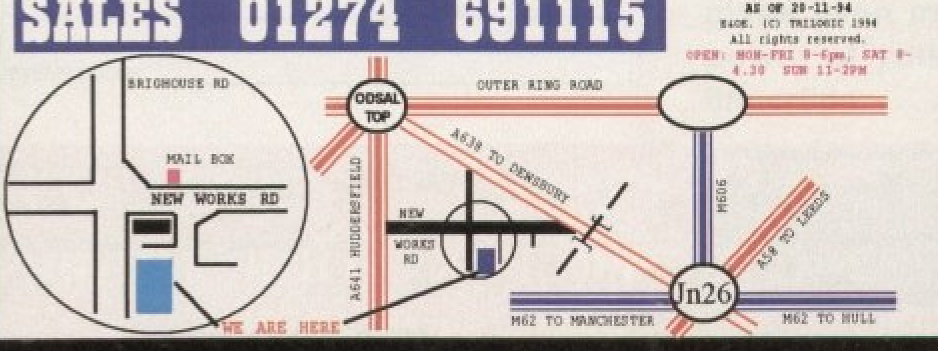
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Pro power at a punter price



At last S-VHS at a sensible price. Paul Austin test drives the Maxigen2

As you can see from the photography, the latest release from NewTronic doesn't offer the dampened faders found on the G2 and Hama S-VHS genlocks, however, for the sacrifice of a little functionality, you do gain an impressive cash saving plus a host of unique pro-control options.

Like the opposition, S-VHS is by no means as prerequisite, and in fact Maxigen2 is equally at home with either a Composite or S-VHS source.

On the rear of the unit lurks twin BNC composites and S-VHS mini din connectors plus a monitor pass-through, and of course the all-important RGB in from the Amiga.

In addition, there are also three grub screw adjusters which provide control over the RGB values of the incoming Amiga signal – however it must be stressed that the factory presets shouldn't be touched unless you're equipped and experienced with a vector scope or waveform monitor.

On the front of the unit awaits a single pan pot for crossfading between the Amiga and video signals, plus a second to adjust colour saturation – therefore allowing black and white to colour transitions on the fly. A useful and fairly unique feature.

Towards the centre sits the all-important flick switch which toggles between inverse video – otherwise known as the keyhole effect – a basic video-to-Amiga crossfade and lastly, a keyed or genlocked video mode.

DISPLAY

The three modes offer the following display options. In the inverse mode colour, zero becomes solid while all others produce holes in the colour zero mask – with pan pot adjustment allowing control of the mix of both the video and Amiga signals.

In the middle setting either the video or Amiga signal is shown as a solid, which when aided by the pan pot allows crossfades between the two.

In the third mode we arrive at the most famous effect of them all, with colour zero in the Amiga's colour register becoming transparent while all others appear to float effortlessly above a live video backdrop.

In this case, the pan pot once again comes into its own, enabling the user to fade the Amiga graphics up and through the video image.

To the right of the mode switch awaits yet another six grub screws which provide direct control over brightness, colour contrast and the overall colour components of the outgoing VHS or S-VHS signal.

Again, these shouldn't be twiddled with by the faint hearted. For a video professional they offer a unique opportunity to fine tune the outgoing signal. Unfortunately, I found the temptation too much and consequently spent the next two hours re-adjusting to regain the excellent image quality offered by the defaults. However, my little adventure did provide a few valuable insights into the potential offered by the six control screws.

Each of the six adjusters act separately on a specific element in Amiga and video image, so it's possible – with the aid of a screwdriver – to alter the luminance, chrominance and contrast of the video in relation to the overlaid graphics, thereby providing the kind of control over composition previously only available to those who own a time-based corrector.

Lastly we arrive at the final duet of toggle controls allowing selection of either a VHS or S-VHS source, plus a simple off/on setting for vertical sync – which in certain situations can help stabilise the outgoing signal.

Pros and cons

The most important of the plus points has to be the excellent keying quality, which in my opinion is on a par with both the Hama and G2 alternatives.

In addition, the profusion of unique colour and component correction options offered by the assorted grub screws again makes the Maxigen 2 stand out from the crowd.

On the down side, there's the close proximity of the two main pan pot controls – which on occasion can cause problems as straying fingers can become trapped and therefore ruin a crossfade.

Although faders would be preferable, it must be said the pan pots are well calibrated and do offer smooth transitions when handled with the appropriate care.

Another minor annoyance is the inability to connect both S-VHS and VHS signals simultaneously – the end result being garbled output.

Finally, the monitor pass-through is unique in that it displays exactly the same image on the RGB monitor as is being sent via the video out.

This means it's impossible to set-up Amiga graphics on the fly and then introduce them via the fader – unless of course you do the obvious and take a composite output from the Amiga and feed this to the monitor.

Verdict

Obviously minor problems such as the close proximity of pan pots and the somewhat puzzling RGB pass-through does detract slightly from the overall appeal.

However, the fact remains that the all-important keying quality is excellent while many of the advanced control options will no doubt hold real appeal to pro videographers.

And let's not forget perhaps the most important feature of the product, namely the bargain basement price. All in all, a good product and an even better investment.

SYSTEM ESSENTIALS

RED = Essential **BLACK** = Recommended

Video gear (camera and VCR)

The bottom line

Product: Maxigen 2
Supplier: Power Computing
Price: £339
Tel: 0234 273000

Ease of use	9
Implementation	6
Value for money	9
Overall	8



Version 3.1's fire texture is well designed, but the clouds texture was used here to produce the smoke rather than the backdrop image. Don't expect to recreate strato-cumulus clouds with this one!

Editing dream

Stevie Kennedy tests the latest improvements to Imagine as version 3.1 goes out to eager registered users

Imagine 3.0 was a great improvement over version 2.0, but there were plenty of us who felt that the program was still in need of a more sweeping upgrade. Impulse hasn't stopped working on the package since then and the result is 3.1, offering several improvements, tweaks, and some useful new textures.

This isn't a major upgrade, and the authors themselves admit that it's an 'interim' version. We'll have to wait until 4.0 (or whatever they decide to call it) for the long-promised new interface, but for now there's enough to be getting on with.

Of all version 3.0's new features, bones was the most useful and the most difficult to use. A tricky, over-elaborate method of creating and attaching bones meant that users were forced to carry out a series of unnecessary actions to set up the skeleton, and the feature was handicapped from the word go.

The new bones feature doesn't offer better bones or kinematic control, but it does involve a lot less hassle. Once an object has had a hierarchy of bones attached to it, the user need now only select the faces for a bone's subgroup, then choose the new Make Bones Subgroup menu command. When this has been selected, the user need only click on the axis representing the bone and the subgroup is automatically attached.

There's no need to create subgroups then go back and manually associate them with their bones, and the speed increase is noticable. With all that switching from face to object mode taken out of the process, it's possible to bone an entire object in a few minutes.

Probably the most useful new feature, though, is the ability to edit an object's attributes from either the stage or action editors. Until now, Imagine users who were unimpressed by an object once it was in the scene had to go back to the detail editor and change attibutes there, even if the change was miniscule.

With version 3.1, the need has been removed, and the full attributes requester can be summoned from any editor with a work surface. In stage editor, where attribute editing will be of most use, the feature is tacked onto the end of a menu and when any attributes are changed the program saves the object out again.

I would have preferred to have been able to experiment without saving the object out every time, but Imagine at least prompts you with a file requester so that your creation can be saved under a new name.

Another very useful tweak is the addition of a backdrop image view in the detail and stage editors, and the facility to use frames from anims rather than sequences of single 24-bit images. It is now possible to load a backdrop image and view it to check that the current object or scene will fit with the background.

In detail editor, this would be a good way to check for accuracy by loading an animation of, say, a walking man from digitised video grabs. Using this to ensure that a rendered walking figure was as lifelike as possible is what we would otherwise call 'rotoscoping.'

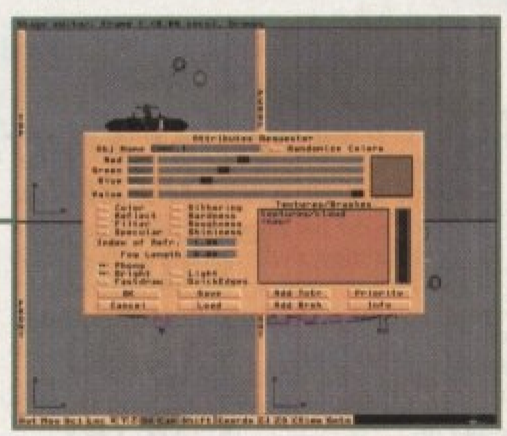
The feature isn't fantastic, and backdrops are shown in only two colours using the current grid settings, but it's better than nothing. Those using other platforms or programs will be more interested in the improved DXF feature. If you tried to use this on 3.0, you'll know that only a small percentage of DXF objects would load and save properly from Imagine, but improvements to the way this feature works now make it more reliable. Control is offered over the way in which objects and layers are saved, making it easier for the experts to use object files from or in other packages.

Other additions include field rendering, which will produce smoother anims for those saving their work to the PAR card or a single frame recorder, better morphing of states (everything works now except brush morphing), and there are some new textures, including fire, clouds, and electric, three very useful newcomers.

In all, for a stop-gap upgrade, this one works well and clears up some of the objections about 3.0. For a program which rivals LightWave for both flexibility *and* ease of use, though, we'll have to hope that 4.0 is more of a step forward.



The new Toon global effect works superbly and can create very striking results



It saves a great deal of time to be able to access the attributes requester from stage editor

What's missing?

As one could have predicted, the 'new improved' lens flare global effect is about as useful as its 3.0 predecessor. This is a minor point, but it's one of those things a LightWave owner will always throw in your face and it would be nice if Impulse got it right at last.

One major re-think the lads from Impulse haven't yet implemented is the way in which Imagine uses brushes. These can be applied in a much more flexible way than most other programs, but they are also very tricky to use at times, and if you once lose track of which axis is going where, your brush attempt can be a disaster.

Some sort of quick greyscale brush preview would be a good idea, if only to stop beginners from giving up in despair. A feature which simply showed the brush's orientation without having to render a zone would be so much better, but I suppose we'll just have to carry on with the Imagine user's favourite 'will they do it next time?' guessing game.

The bottom line

Product: Imagine 3.1
Supplier: Meridian Distribution
Phone: 081-543 3500
Price: Upgrade from version 3.0 is £99.95 + £4 p&p

Ease of use	**7**
Implementation	**8**
Value for money	**8**
Overall	**8**

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Better late than never?



With the arrival of Passport 4000, the NTSC Video Toaster can at last display its talents in good old PAL. Stevie Kennedy takes a look at how PAL is squeezed into the card and whether conversion is worth the cost

You would have to be deaf, blind, or a PC user to have missed the Video Toaster and its effect on the Amiga market. This one peripheral is about the only major stronghold left to the Amiga in the US and now it can be used over here with the help of Prime Image's Passport 4000.

Billed as an all-in-one solution, the Passport is a digital standards converter which does all the work of converting PAL signals to NTSC before passing them on to the Toaster, and converting the Toaster's NTSC output back into PAL.

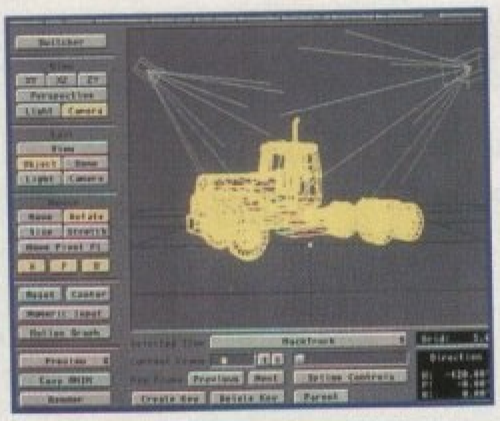
In the past, this sort of standards conversion has been tried and discarded as something which is both too expensive and too rough on signal quality to be worth the effort, but Prime Image claims to have brought its own ingenuity to bear on the problem. From the quality of the resulting Toaster output, I'd say they certainly had a point.

What this sort of video conversion process means is that we can at last see the Toaster working as it is supposed to work. Rather than a hardware platform for LightWave 3D – the only Toaster software we've been able to use in the UK – the dual card Toaster is actually a combination of frame buffer, frame grabber, digital video effects generator, genlock, switcher, and mixer.

Add the Passport 4000 with its built-in Time Base Corrector (TBC) and standards conversion and you have the UK equivalent of what the Americans have been calling 'a TV studio in a box.' With a 24-bit paint program (Toaster Paint) for backdrops and character generator software (Toaster CG) for titles and credits, the Toaster is more or less a complete hardware and software double act.

In the UK broadcasting industry, though, the Toaster will never receive top billing. Engineers and producers from mainstream companies using the BBC or ITV networks are firmly wedded to the expensive top quality D1 and Betacam SP standards, and no matter how impressive the Toaster gets at producing composite PAL and Y/C output, those guys are never going to be happy.

The good news is that established network companies are only the tip of the iceberg. As the UK gears up for cable, video on demand, and even more satellite channels, the multi-talented Toaster is sure to generate a lot of interest. As a cheap off-line or ➤



Perhaps the most familiar face of the Toaster. Lightwave, simply the best in the business

Scrolling and crawling

Generating text and using it on screen is one of the central requirements of any video or TV production studio. This activity, which can be seen in every programme's credits, every news bulletin, factual show, subtitled films and so on has spawned its own industry of high quality character generator boxes which cost thousands and do just about everything.

Toaster CG is a program blessed with the inclusion of 283 high quality Type 1 PostScript fonts and a seamless integration to the Switcher and other Toaster system components. It has several uses, but the most common is the production of credits for videos, an activity at which it excels and which it performs with ease.

There are two basic types of moving credits – the horizontal crawl and the vertical scroll – and both can be produced using Toaster CG. For zany effects where text has a perspective look to it, such as in the Star Wars opening, frames of text can be rendered to the framebuffer as images and then given warp and transparency using Toaster Paint.

In Character Generator itself, any of the scalable fonts can be loaded into the program and given alterable



State-of-the -rt character generation. The perfect titling accompaniment to the Toaster

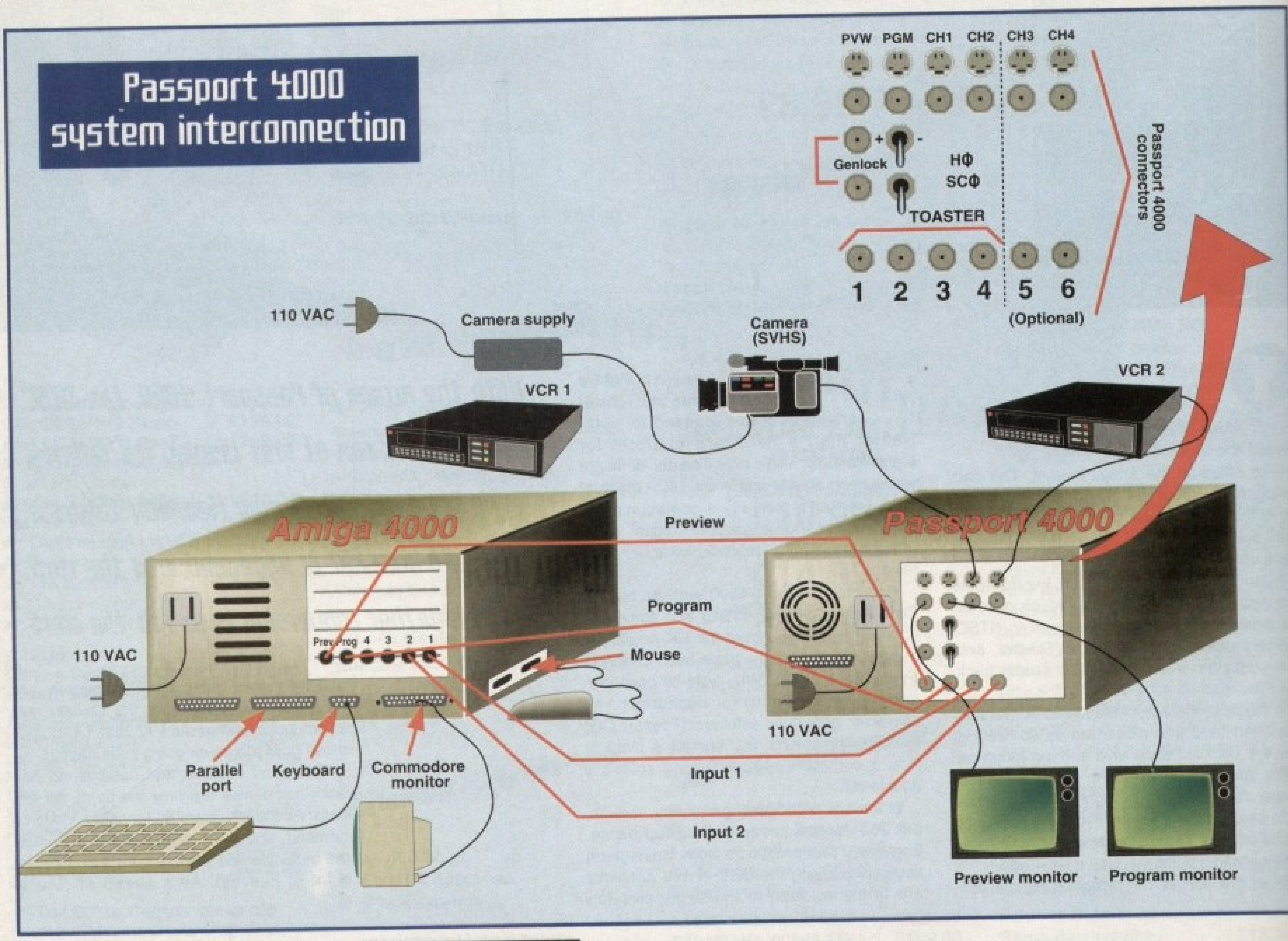
post-production system, Video Toaster offers smaller companies a unique one-stop solution to problems which would otherwise demand much more expensive answers.

For example, the industry-standard Aston character generators can cost as much as £5000 each – close to the total price of the Toaster/Passport double act and covering only one of the Toaster's areas of expertise. Any producer creating low budget training or corporate videos would be barking mad not to take a look at what's on offer.

From the outside, the Toaster is a simple enough device. Usually supplied pre-installed in an A4000 with all software loaded and ready to run, the business end of the card can be found at the back. Here the user is given a choice of four video ins and two outputs, one for the target video recorder and one for a preview monitor.

By hooking up two VCRs and another for the final output, simple A/B editing can be carried out 'on the fly' with the benefit of a huge bank of transitions, wipes, and fades. Titles and credits are added through Toaster CG, custom transitions can be drawn in Toaster Paint or rendered using LightWave, and both programs can be used to produce

Passport 4000 system interconnection



amounts of shadow and outline before being previewed over the video source using the clapperboard icon.

In addition, justification and text centering are automatically taken care of, and transparency can be used to create text-shaped holes over a backdrop image. The latter can create effects similar to the Lion Bar advert on TV. Just type in the word Lion, tell the program to make the text face transparent with, say, a 10 per cent transparent white border, then slowly crawl the text across a backdrop image of a lion.

BACKGROUNDS

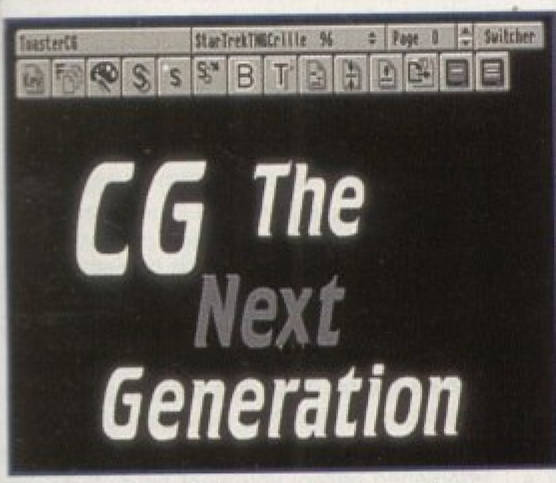
When this is played over a video source, the black background is keyed out to be replaced by live video and the text itself is used as a hole over the lion image. The solid white border keeps the shape of the text on screen, and a semi-transparent shadow can be added to even greater effect.

Gradient colours can also be applied to the text, and all shadows can be set for depth and direction, so within its limits the program is fully configurable. As the 256 levels of alpha channel are always available, Toaster CG can be used for subtitles with light grey boxes round them for clearer reading on screen, soft text for subtle on-screen effects, and so on.

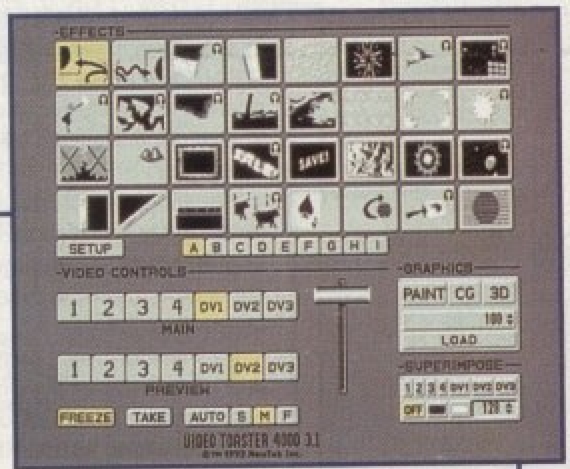
Speed for crawls and scrolls can be set using a meter icon ranging from very slow to faster than you can read – enough variety for most producers and all in perfectly smooth motion. Unless you want the whackier effects offered by a program such as Broadcast Titler 2 or Scala, Toaster CG is powerful enough to fulfull most requirements, and with its high quality fonts it produces sufficient quality for any job.

In addition, it uses any Type 1 or Type 3 PostScript font and can access any Amiga Intellifonts already installed using the Fountain utility, giving it an advantage over those CGs which use their own font formats.

If a client was to ask for a typeface you didn't have on your machine, one of the hundreds supplied might be close enough, and if not you'd have the option to choose from the huge number available through third-party suppliers and shareware libraries.



Although the preview screen can appear in black and white, the final output is amazing



An incredible selection of transitions, all available at the touch of a button

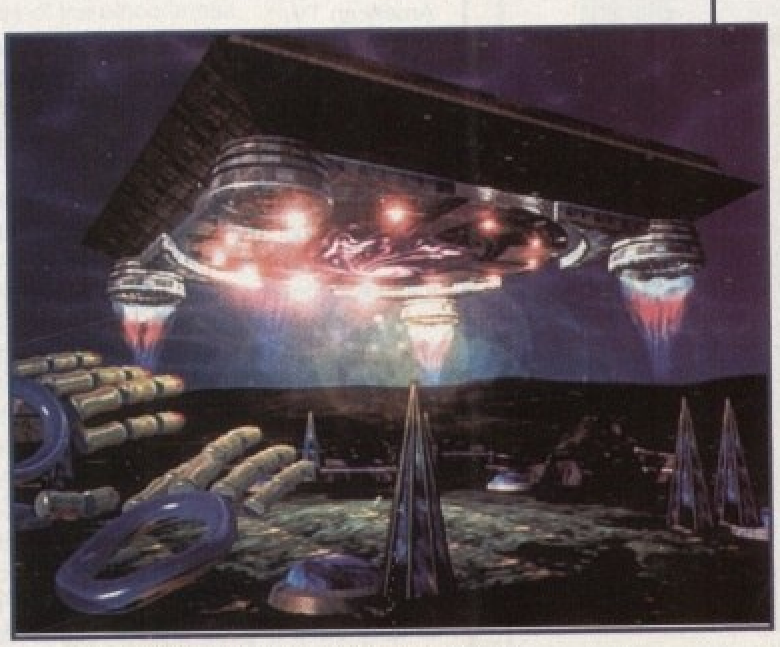
24-bit backdrops and other graphics. At the heart of the system is Switcher, a program which guarantees total integration of the system elements. With this, one can load Paint, CG, or LightWave – all three at once if you have the memory – and it is from here that input and output is controlled.

KEYING

Nine banks of digital video effects (DVEs – 288 in total) stand ready for use, there's a superimpose panel to control the keying of video using other video images or a user's own choice of overlay graphic, and luminance keying can be controlled by dragging the on-screen T-bar with the mouse. Superimpose offers huge potential through its 256 levels of keying, and can be used for anything from simple top-to-bottom fades to complex transitions created from the users own animations.

Easy-to-use controls cover the speed which effects play, and there's a freeze button to capture a frame of video and hold it in one of the Toaster's two 24-bit buffers. For all other operations, a Setup button enables access to the confusingly named ChromaFX (which is in fact a luminance keyer and should be called LumaFX), and to a preferences screen.

Here the user can load and preview images to be used as Framestores in Switcher, or set the default background colour for DV3 (the extra frame buffer into which CG scrolling pages and LightWave animations are loaded). There's also a hardware control panel to select the monitor on which Switcher is displayed, and to turn on ➤



A classic Lightwave creation, which can even be used as a transition if the need arises

Finger painting

Toaster Paint isn't the best 24-bit paint package in the world, but it isn't the worst either, and has all the features necessary to create images which can be used by the rest of the system.

Probably the program's biggest drawback is that it is very slow because it uses the Toaster's framebuffers to render the image but not to paint on. As with GVP's IV24, the internal 24-bit buffers aren't used for direct 24-bit painting, and when the user wants to see what a picture will look like through the DV1 or DV2 framebuffers, he or she must first click on the clapperboard icon to render the image.

By default, Toaster Paint operates on a quarter of the full screen image, and autoscrolling takes care of movement around the full screen. There's a 'near full' 90 per cent view for overall previews, but several features including custom brushes, texture mapping, and warping are unavailable in this mode.

Texture mapping and warping, when used in conjunction with the program's transparency option, can create superb blended graphics for use in Switcher. Perspective effects to simulate 3D and mapping brushes to spheres are the most spectacular features, but the number of uses for these options is limited only by your video requirements.

PRECISION

Any brush cut out by the user can be warped or texture mapped to a precise size and shape, and the program has very easy-to-use panels to aid in the operation. A wire frame sphere is used to show a graphic representation of the warped brush and another solid shaded sphere is used to preview transparency.

All styles of effect are represented as simple icons which control the amounts of warping or transparency, and by clicking and dragging a small hot-spot icon it is easy to set the centre of the effect. Experimentation is therefore a complete doddle and it doesn't take long to find the required combination.

Drawing tools themselves are fairly standard, but the undo and redo features are capable of reversing any action since the last mouse click in the canvas area (good for messing around with different transparency settings), and there's a decent palette screen.

Text is also well handled on screen, but the lack of a good airbrush might upset some artists. For generating graphics which can be used in Switcher, Toaster Paint is a solid performer.

or off a General Purpose Interface (GPI – an industry-standard external triggering system).

This level of control means that users can make use of several of the Toaster's features at the same time. For example, a ChromaFX effect such as colour cycle can be applied to your preview video source, then slowly faded across from the preview to the main source using any of the animated wipes and the luminance keyer's T-bar.

In this example, the transition happens as normal except that now it is combined with a ChromaFX effect. Further deft use of the effect banks, frame buffers, superimpose and ChromaFX can result in what looks like very complex and time-consuming video effects but which are all set up with just a few clicks of the mouse.

EFFECTS

Apply the ChromaFX sepia tone to your preview source and the 'old film' effect to your main source and the result is a sepia tone 1920's film complete with flickering and scratches. Even half-completed transitions can be mixed together to create strange or weird effects – there's plenty of flexibility built into the system.

Setting up ChromaFX is fairly easy. Once you enter the program, a 96-level colour bar is used to set how the image colour will be affected, and all you need do to create a funky effect is to spread a rainbow of colours across the bar. These will be applied to the lighter and darker parts of the image depending on where they fall on the colour bar.

For example, if you made the brightest level of the colour bar bright blue and the brightest part of the target image was a person's face, then the face would appear blue on the final image.

It's therefore very easy to use a combination of browns and yellows to create your own sepia tone effect or to use blues and greys for video which will run as a backdrop to a screen of text information. With a meaty enough machine, all three main elements can be loaded and run at the same time, and as the display from Toaster Paint or CG is loaded into a framebuffer automatically when you swap in and out of Switcher, it's a quick and easy task to work on a project using all of the Toaster's facilities.

FINE-TUNING

After three years working non-stop in the American TV and video industry, NewTek has gathered enough user feedback to have fine tuned the Toaster to its environment. There are no dinky little buttons and sliders as found in the PC's so-called video software, because when you're working in a darkened gallery you want big buttons you



Arguably one of the most impressive special effects available via the Switcher.



A spectacular still from SeaQuest DSV. Thanks to the Toaster and the Amiga it is now a major player in the movies



Newtek's long-awaited adventure into digital video. Now the Toaster can offer a complete videographic solution on a single platform

The big squeeze

Converting NTSC video signals to PAL format is not as easy as it sounds. The two broadcast standards are very different, and the quality of conversion is about the only touchstone for Passport 4000's worth as a solution to the problem.

To begin with, an NTSC signal runs at 60Hz (30 frames per second) with 525 lines from top to bottom. The PAL standard calls for 50Hz (25 frames per second) and 625 lines, which results in the clearer resolution of UK and European TV compared to American TV.

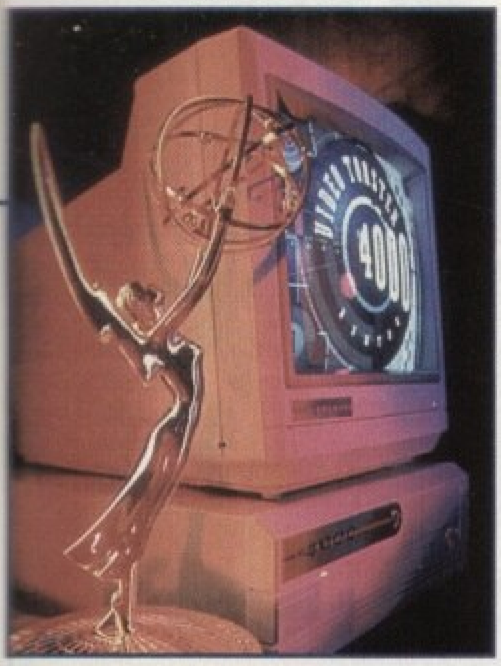
When a PAL signal is relayed to the Passport 4000 it must be converted to NTSC before the Toaster will accept it, and it is here that Prime Image thinks it's come up with a winning solution. Rather than use what is termed 'averaging' to squeeze the extra PAL information into an NTSC signal, Passport 4000 has a pass-through interpolation system.

In effect, this means that when five frames of PAL signal are fed into the system, the fifth is duplicated to create the 60Hz NTSC signal, then removed again when the signal is passed from the Toaster to Passport 4000. Everything happens inside the Passport in full digital format to avoid the 'drifting' which can occur with older analogue systems.

Each channel of video has its own '6+ field memory' which stores timing and interpolation information live as the video signal is being converted. This means that when the 100 lines missing from an NTSC signal are compressed and decompressed digitally, there is little or no signal loss. Prime Image claims complete 4:2:2 signal throughput, and the quality of the output seems to support the claim.

All this calls for extremely accurate timing, provided in this case by an on-board time base corrector and synchroniser. Transcoding between PAL and Y/C is also taken care of by the Passport's cards (one of which is required for each video source), so the unit has the advantage of removing the need to buy, say, two or more GVP TBC Plus cards.

Normal Toaster use in the US calls for a TBC card for each VCR used (most camcorders have a good enough signal that they don't need one) so that all the system elements work on the same timing. Passport 4000 is an extra expense for UK users, but



Transition city

Wipes, fades, whacky animated transitions – you name it and Switcher's got it. The bits we all play with first of all are the banks of built-in special effects, and they contain several types of DVE.

The simplest are smooth fades which use luminance keying to cross fade between two sources or to fade computer graphics in and out of the current source. Most complex of all are the warp effects, which compress and wrap video sources onto spheres, cubes, warped polygon shapes and so on before spinning, folding, or rolling a video source off or on screen.

These happen in real time while the video source is still playing, though some of them (particularly the sphere effects) look very blocky due to hurried compression and the process of digitising them. Others, such as those which snap the video source into a square and fly the square off screen, simultaneously shrinking it, are very impressive and reminiscent of American cable TV style.

Four of the effects are also positionable in that the user first selects them, then drags with the right mouse button to set a target point. In effect, this gives the user a transition which can be changed from job to job.

Where solid 'mattes' have been used (a matte is a two colour representation of another image used for keying purposes), the colour of the matte can be changed at will, background colours can be changed on most other transitions, and there's up to three levels of speed control on many of the effects.

In all, the special effects and wide range of more work-a-day transitions give Toaster users a huge amount of choice. Many of the very cheesy effects won't be used, but there are enough to be getting on with. Creating new ones in Toaster Paint or LightWave is always a possibility, so the sky's the limit.

can see and click on at a split second's notice. There's also no over-stuffing with gimmicky features found in some multimedia software.

What the Toaster does it does with the least possible effort and in the simplest way possible, leaving the video people to worry about results rather than the way to get them.

Those results are about as good as you're ever likely to see outside a full-blown broadcast editing suite, and even with the stiff additional expense of the Passport 4000, this PAL-friendly Toaster system can't fail to make a few inroads in the ultra-competitive and cost-conscious world of cable and satellite.

The only thing left to say is "not before bleedin' time!" AC

The bottom line

Product: Passport 4000/ Video Toaster
Price: £5000 + VAT
Supplier: Ramiga International
Phone: 0690 770304

Ease of use	**9**
Implementation	**9**
Value for money	**8**
Overall	**8**

it does have the built-in TBCs and Y/C transcoding to offset the initial outlay. A further advantage of the Passport approach is that all video signals are encoded digitally before and after the Toaster gets hold of them, which helps when using some of the Toaster's DVEs.

In normal workings across the Atlantic, the use of a moving digital effect over an incoming analogue video signal can cause 1/15th of a second stutter in some cases, but I didn't notice any of this when using Passport 4000. Whether this happened through lucky flukes or because the system is being synchronised externally is hard to tell, but the fact that even the 8-bit samples are attached to some effects (such as the shattering glass DVE) points to the external box as a cause of the smoothness.

OUTCOME

The proof of this particular pudding is in the viewing rather than the eating, and when used with the Video Toaster, Passport 4000 output looks great. Signal quality seems not to have been sacrificed at all if the results of our test drive are anything to go by.

The output from a camcorder when sent directly to a composite video monitor cannot be separated from the signals sent to an identical monitor by Passport and the Toaster – even after DVEs and Toaster CG have been used to add Toaster graphics to what was once a PAL signal. That's the verdict of my only reliable test meter – my own eyes – and if you can't see the difference then it can't be there, right?

Previews from the Toaster show how Passport's interpolation slows things down on the Toaster itself, but the effect is a purely internal one. The preview monitor will show CG pages jerking slightly as they scroll, but main output to video is unaffected once the extra frame has been removed and the conversion process completed.

Apart from this indication on the preview monitor, everything else about Passport 4000 is transparent to the user. The unit has a good freeze frame grabber built into each card, and front mounted controls for adjusting luminance, chrominance, contrast, and brightness, but for the most part the Passport just sits there and does its job.

There have been doubts about how well Passport would work, and I had plenty myself before using it, but if a test of a unit is that you can easily forget it's there in the first place, Passport 4000 passes with flying (and non-blurred) colours.



Yet more state-of-the-art television production, courtesy of the Toaster and Lightwave team

Magic moments

Dim the lights, wave the magic wand and hey presto! it's Magic Workbench 2. Nik Lines reveals all

The world, its brother and his cats have all seen Magic Workbench by now. For those still left who haven't, MagicWB is a rather incredible package that will make your Amiga a much nicer place to work.

"Sweeping generalisations are dangerous", so people say, but in this case the generalisation holds true. MagicWB is a collection of eight colour icons, patterns, documentation and a few support programs which in itself doesn't sound revolutionary. It's when you see the quality of these icons and patterns that you get some idea of just how 'useful' MagicWB is.

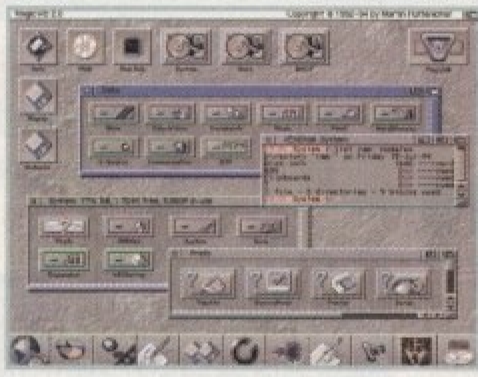
MagicWB contains new images to replace all of your standard system icons, lots of utility icons and over 50 drawer images. These drawers have small representations of what is in the drawer shown on them (for example, tools have a spanner on them and painting drawers have a palette on them) and they're great!

ToolManager users have a bonus included too as there are around 50 dock brushes which can be added to ToolManager. MagicWB comes with two files to append to your ToolManager configuration, saving you having to load each brush manually – thankfully.

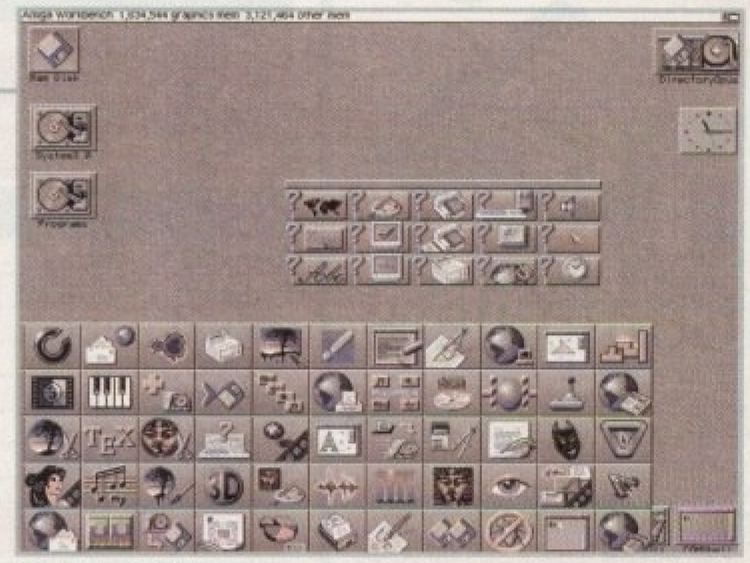
With MagicWB 2 there are two very useful programs. IconUpdate tackles a common complaint about older versions of MagicWB as it will replace an icon's image without losing position information and tooltypes.

MagicCopper is a program which plays with the copper of AGA machines to give stunning gradient fills of the background. Unfortunately, no screen grabber will take a snapshot of these so you'll have to take my word for it that they're excellent.

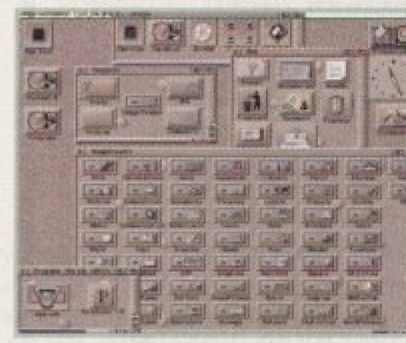
Pattern-wise, you've got 52 to play with. Most are truly superb and must have taken an age to draw. There are four which are designed for use with MagicCopper and are therefore AGA only. The full-screen 'Intel Outside' logo will probably get a lot of use because it looks excellent with the gradient backdrop. Interestingly enough, icon and pattern sizes have halved in size and memory requirements; this is some feat. It is down to a small program called MagicDaemon which makes all icons and patterns have the correct colour. No, I don't know how. The daemon is also responsible for a great suprise occasionally which you really have to see, preferably in front of a PC owner.



It's amazing what can be achieved with just eight colours



In this latest release even drawers have to be customised to show their contents



TROUBLE-FREE

Installation is achieved through a shell script, not the standard Installer. The author tells me that this is because Installer won't do what he needs it to and I for one believe him. The installer works well without a hiccough – apart from insisting on putting the MagicDaemon invocation in both your user-startup and startup-sequence for no apparent reason.

A script is also provided to replace drawer icons with the standard MagicWB icon, but I think most people will elect to manually replace them with the ImageDrawer icons. Another change from older versions of MagicWB is that the colour palette has been made darker. This makes the package look stunning on AGA machines or for users who have 24-bit graphics cards, but looks slightly too dark on ECS machines. The fix is simple – change your palette.

MagicWB also comes with three fonts in differing point sizes to replace Topaz, Courier and Helvetica. These are all very well designed and improve your Workbench no end. It's almost worth buying the package just for these – they really are that good.

A great many icons have been drawn by other artists and these are not included in the package. However, they are easy enough to find and are completely compatible with MagicWB 2. These sort of add-ons are appearing on AmiNet at the rate of one archive a week!



A backdrop of over fifty excellently drawn images – all part and parcel of the £15 price tag

Signing the register

MagicWB has recently overgone a drastic overhaul. It used to be the case that you could buy/download MagicWB from anywhere and register it when you felt like it. Now, you can buy/download a few screenshots of MagicWB 2 which will hopefully make you part with your hard earned cash for it. MagicWB is shareware, as it always has been, but now you have to register to get the package.

There is a UK registration site and the address is provided below. Despite the warning that it would take up to three weeks for my personalised package to arrive, two days later the package dropped through my door. Good service!

All in all, MagicWB is worth much more than the £15 registration fee. It's something that you will use every day for a long time to come. Get it now!

The bottom line

Product: MagicWB 2
Supplier: Paul Jewell, 7 Fairfield Avenue, Cardiff CF5 1BR
Price: £15 (upgrade from registered users of MagicWB 1.x is £7)

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Seeing in stereo

A bizarre mass of pixels or a hidden picture? Adam Phillips investigates Stereo CAD for some answers

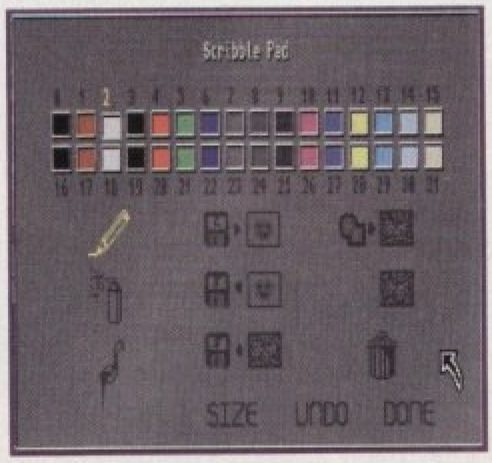
Stereograms hit the big time in Britain a year ago. Shelves in booksellers reserved solely for the Monet, Picasso and Rembrandt books began to fill with thick tomes of large pictures that, at first glance, appeared to be a mass of meaningless pixels.

People's reactions to the strange phenomena are predictable. There are two – firstly, the blank stare of a professional as they throw their focus on the page and try not to look at what's in front of them. After a while the submerged, hidden 3D image becomes apparent through the jumble of pixels and, for the first time viewer, this is as near as we'll ever get to the feeling of incredulity that viewers of the first moving image must have felt all those years ago.

The second reaction is a blank stare followed by a slow shake of the head on realising that they must be one of the one-in-ten people who can't see the image within the picture.

For those who can see them though, and have become avid buyers of the rather expensive books, a software package has been produced so that you can not only view these images but create them at a leisurely pace into the wee hours of the morning.

Stereo CAD is the first Amiga-based stereogram creator of its kind. Already released on the Atari ST a few months ago, the program comes on a single disk with a brief but clear instruction manual, providing the user with everything he needs to produce a work of 3D-pixellated art.



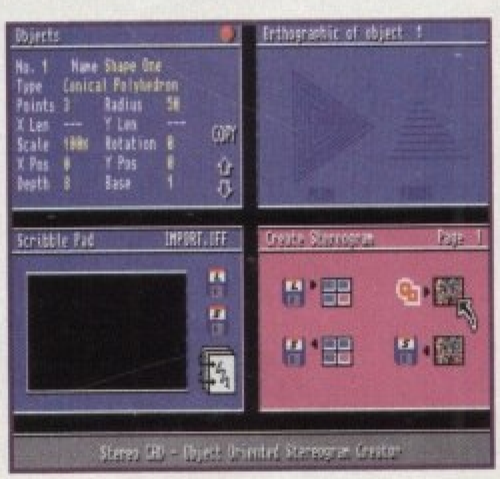
The scribble pad feature offers basic drawing tools to include in the final stereogram

Booting up the program reveals a simple control panel divided into a series of sections. The first is the object creator where a series of shapes or text can be created for use in the stereogram. Spherical and conical polyhedrons, tubes, prisms and stars are the main objects to aid you in your image making.

LAYERS

Text can also be typed in and displayed in the twelve fonts found on the boot disk. All the user needs to do is select what shape they want and then position it in the second window. The system is centred round a series of layers on which each shape can be placed to give the illusion of pseudo-3D. Coupled with the ability to alter the radius, *x* and *y* positions and the size with a simple click and slide of the mouse, the end results are worth the labour.

There is also a sketch pad where crude drawings can be produced and loaded into your stereograms to add that personal touch. IFF files can also be imported to act as backgrounds or objects, so any clip art you may be using in Wordworth and the likes can be put to good use. Once happy with the placing and layering of your images, simply click on a button and the program quickly draws the stereogram for your viewing pleasure.



Create your own effective stereograms with Stereo CAD

Staring directly at the screen took me a little while to get used to, but after a while the image pops up into your line of vision and works extremely well on simple shapes.

My main criticisms of the package are that the text is rather difficult to make out against the background and requires some real squinting to locate and recognise. Also, more complex shapes are extremely taxing on the eye. On many occasions, the *Amiga Computing* crew couldn't make out some of the objects, no matter how long they sat there.

Once you've produced the finished masterpiece, Stereo CAD allows you to save your results out as an IFF file and then print it out to your heart's content using a decent quality printer. ➤

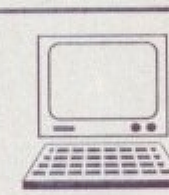
It's a must

To be honest, when I first clapped eyes on Stereo CAD it smacked of public domain with its unplush, though friendly, user interface but, after dabbling with the system for an afternoon, it became apparent why the package costs £29.95. Results are pleasing and, like any art package, you're only going to gain satisfaction from it if you put the time in.

There are problems that could be addressed in future upgrades such as the lack of a preview screen where all objects can be moved round at the same time instead of resorting to each shape's separate preview screen in turn. Also, the scribble pad could be made more comprehensive so that more intricate drawings could be created.

Niggles aside though, Stereo CAD is a worthy buy, especially for stereogram fanatics whose coffee tables are beginning to creak under the pressure of those heavy tomes.

SYSTEM ESSENTIALS

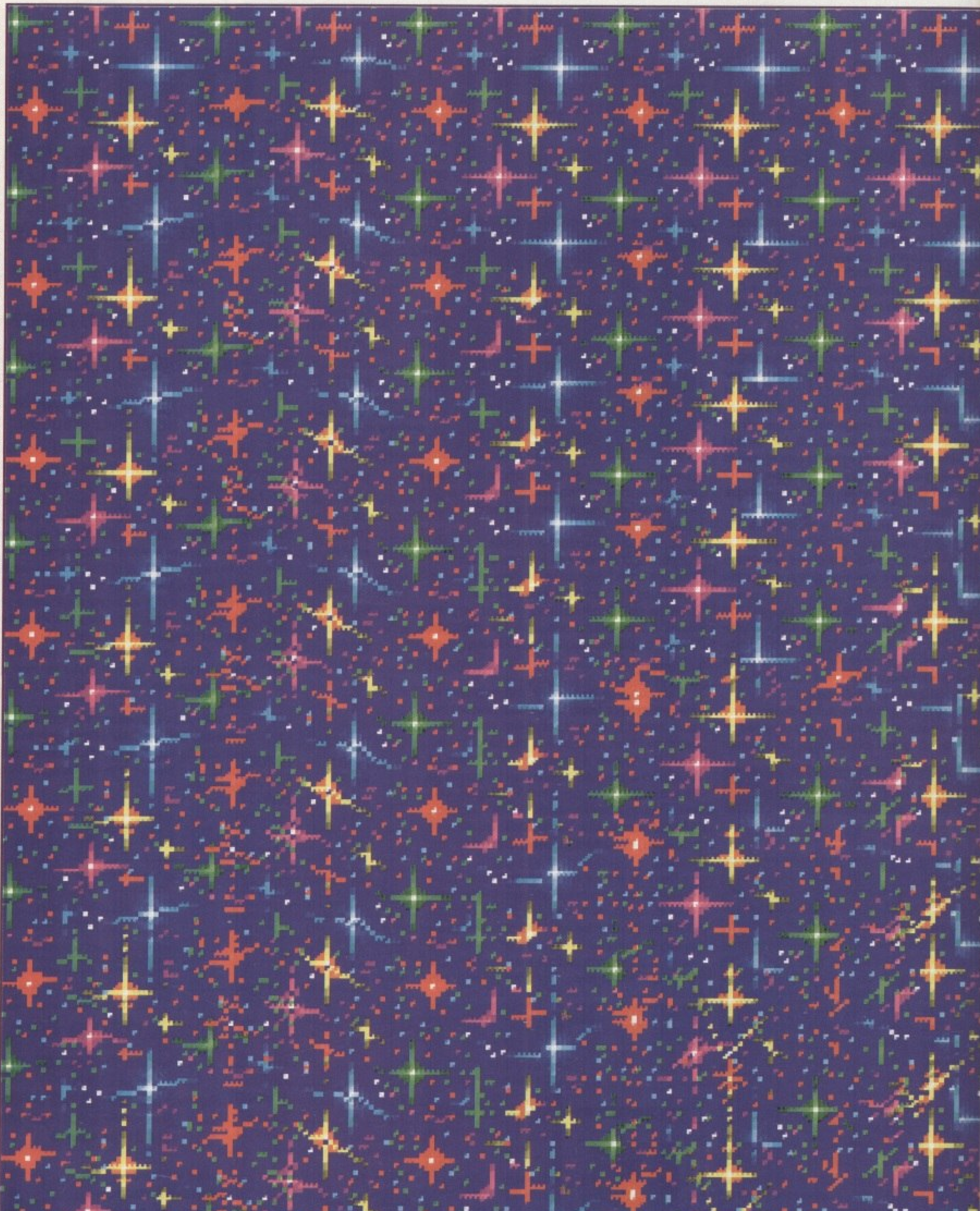


Works on any Amiga

The bottom line

Product: Stereo CAD
Price: £29.95
Supplier: JCA Europe, 30a School Road, Tilehurst, Reading RG3 5AN
Tel: 01734 452416

Ease of use	**8**
Implementation	**8**
Value for money	**8**
Overall	**8**



Hold this picture about one/two foot away from your eyes and focus on an object three to four feet behind. Once done, shift your eyes onto the picture without refocusing your eyes. Eventually, the hidden image will appear...hopefully

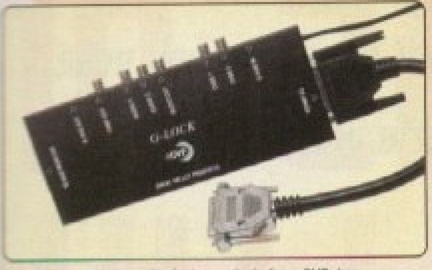
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GOLD 94%

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FOR AMIGA 1200



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RAM BOARD UPGRADES

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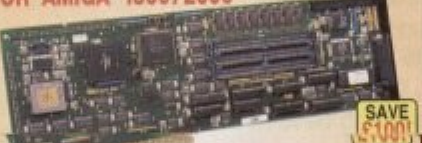
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*MIPS (Millions of Instructions / second); a normal Amiga runs at .67 MIPS

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Amigas on the

I remember 20-odd years ago getting my first Black and Decker drill. I couldn't wait to buy all the attachments which went with it. These swiftly followed as I could afford them, the jig-saw, the orbital, the circular saw and the hedge cutter. The problem was the drill packed in soon after, and needless to say, this rendered the accessories useless!

Determined not to be beaten, out came the tool kit and apart came the drill, and after struggling for a couple of hours, and with a few spare parts, it finally sprang back to life. Like the story of the sweeper-up at the factory who said: "This has been a grand brush, it's only had three new heads and four new handles," my drill followed the same philosophy.

That attitude has followed me with computers, and my old Amiga 500 and 2000 have been cannibalised, rebuilt, modified and butchered to the point where little remains of the original machines. I picked up a few tips along the way, and together with my studies, accumulated a fair knowledge on how to save on expensive repairs.

It's time to pass some of these on now, so over the next couple of pages, we are going to look at some sensible repairs and maintenance which might just save you a few bob. All of your 500s and 2000s should be well out of warranty by now, so lets not be shy, and get stuck in.

The power supply

There are two types of Amiga power supply, and these are easily differentiated. The first uses a transformer and weighs about the same as a household brick. The second uses thyristors and weighs about the same as a can of beer.

Apart from the obvious, which involves checking the fuse and the wiring at the plug, repairs on the lightweight type end here. The reason is that the thyristor variety employs a capacitor, holding some 300 volts, even after switching off, so leave it alone. That one is a dealer repair.

The second type is more flexible, but before you do anything, unplug it! Underneath, where you would expect to find the four screws, Commodore chose in its wisdom to cover these with little cream plugs. Despair not, these can be levered out with a sharp point, then sling them. Opening up the two parts of the case will allow the innards to be removed.

The first test is continuity, and this involves turning the meter to resistance setting and placing each of the probes at either end of the three cables which run from the plug to the circuit board. Check for continuity.

Forty per cent of Amiga faults are with power supplies, and there are usually three causes. Firstly, the cable breaks after lots of use, where it travels into the power supply, hence the continuity check. If you find one of the lines broken, de-solder the whole lot and replace the cable.

Secondly, there is a sneaky 400 mA fuse on the circuit board. Again check this for continuity. If it's blown, as is often the case, you'll get one from most electrical or television shops.

CURRENTS

Thirdly, and more tricky, are the two diodes which sit on the centre of the circuit board. These act as rectifiers, and are a common source of problems. To test a diode, remember that it will only allow a current to pass through it one way. The component is grey in colour, with a black stripe at one end – this is the cathode.

Connect the meter, again with resistance, across the two ends. Anode to cathode should produce zero resistance, while the converse should give infinite resistance, registering no current.

The diode is a 5 volt, 9 Amp diod. If you find one of them, or both are faulty, you can get them again from Maplins or Tandy. Make sure you solder the cathode at the correct end. Once completed, re-assemble and test. Never test the unit while it is dismantled.

Another word of caution. Be careful with the wires from the transformer to the circuit board as a few years of use makes them brittle, especially at the point where they solder onto the transformer tags.

Other than the points mentioned, there is little else the average punter can do to effect a repair. If all these fail, sling it. Do consider buying one of the higher-rated power supplies if you are replacing. The original version supplied wasn't intended to take the strain of all the third-party add-ons we have all accumulated over the years.

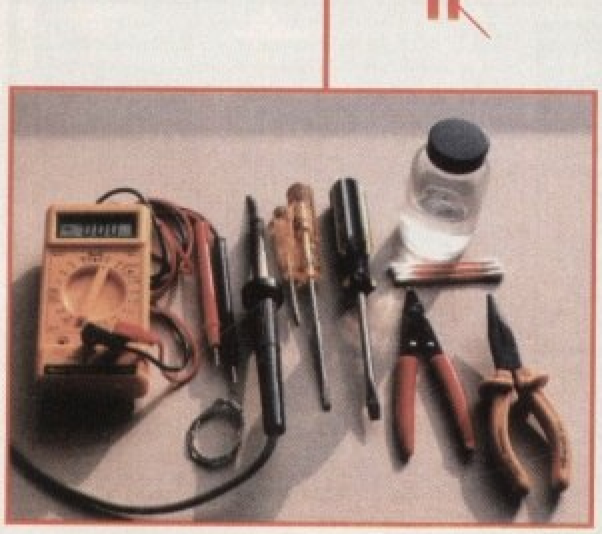
The power supply in the 2000 is a completely different kettle of fish, and this can only be accessed by removing the lid of the 2000. Again however, there is a 400mA fuse on the circuit board, but you will have to remove the whole assembly, disconnecting the drives and lifting the assembly away in order to gain access to the screws which hold the perforated metal skin over the circuit board.

We're going in.

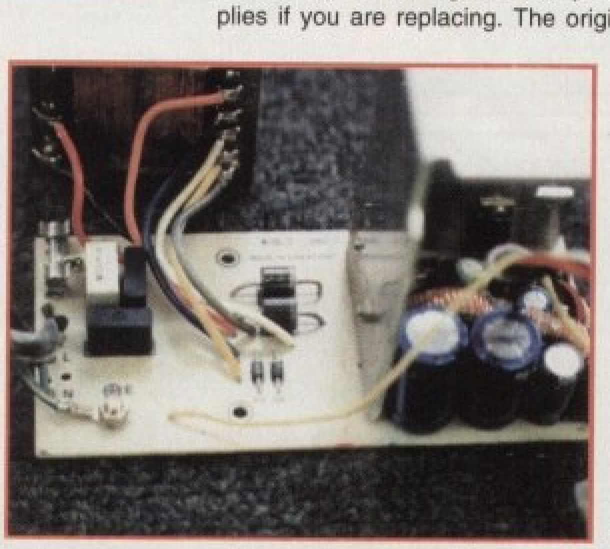
Your power supply isn't at fault, 'cos you've checked it on your mate's machine, and your Amiga still doesn't work. What now? Check out the video lead if you have no picture, try your mate's.

Similarly with the audio lead. Inspection will easily identify a broken solder joint, especially if you have a scart connector, where the solder tags are famous for breaking. The moulded plugs sometimes supplied on video, printer and audio leads are a dead end unfortunately – sling them if you have identified them as the culprit.

Eventually we arrive at a situation where it is evident that the fault is inside the Amiga, so with determination and a sense



You may well be raring to go, but first of all, get together the right tools. Nothing fancy or elaborate, just the few illustrated, and you are ready for the off. I would particularly mention the test meter. This is not really to make any sophisticated measurements, mostly continuity testing, as this is one of the main causes of problems. A cheapo Maplin analogue will do which will only set you back about a tenner, but it's money well spent.



Inside the transformer-based Power Supply. Spot the 400mA fuse next to the red wire from the transformer, and the two diodes in the centre of the circuit board.



The Fat Agnus takes a little more care. Using an electrical screwdriver, you need to exert gentle alternating pressure to the two slots diametrically opposite each other on the holder.

Wilf Rees guides you through a series of checks to save you money on repairs and get your Amiga up and running after it's been feeling rundown

Workbench

Chasing the fault.

Actually diagnosing a fault can be difficult, and not always as obvious as you might think. Some characteristic malfunctions are easily traced, if the obvious alternatives are eliminated.

A classic example is a problem with the mouse only operating in one axis. It's useless messing about inside the Amiga unless you are absolutely sure the mouse itself works perfectly, so the mouse needs checking on a fully-working Amiga to determine where the true fault lies.

Once the mouse has been tested as OK, then it's more often than not a problem with one of the odd or even CIA 8520 chips, and these are usually blown by carelessness, i.e. not turning the Amiga off before connecting a peripheral.

The key to sourcing the nature of a problem lies in my Fault Finding Chart, and you should use this as a rough guide to chasing a fault. Before we consult that, however, there are a few tips regarding CMOS devices, or the old chips on your motherboard.

All charged up, and ready to go. As you happily go about your preparations for Amiga demolition, you will unknowingly build up an electrostatic charge in your body. This is not a terminal Amiga-related illness, honest, just a natural phenomenon related to the abrasion of non-conductive materials, such as rubber soled shoes and nylon carpets.

Unfortunately, electrostatic charges can build up to hundreds of thousands of volts, and to any IC this is fatal. There is a simple remedy, and this involves discharging the build-up to earth.

The easiest way is to grip a cold water tap, or the pipe leading away from it (only if it isn't painted.) Domestic wiring circuits usually have an earth strap to the cold water pipe ➤

of adventure we turn the 500 upside down and remove the six screws which hold the two halves of the case together. The top will then lift straight off, and the metal shielding will be revealed.

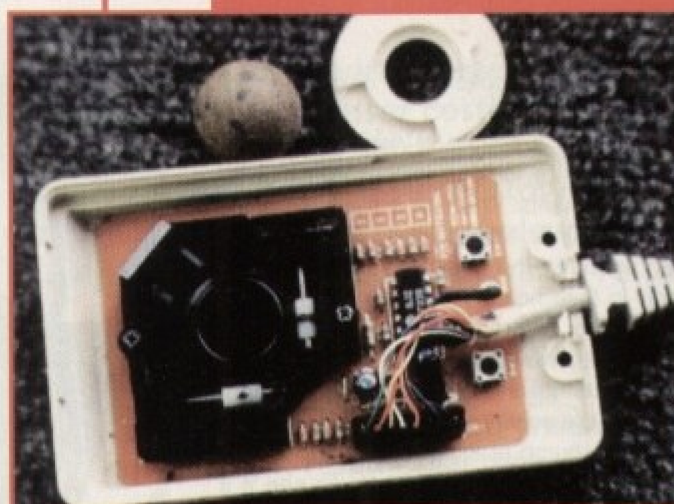
Firstly, the keyboard needs unplugging and lifting away, and this is done by grasping the connector which comes from the keyboard and travels into the centre of the shielding. Gently draw it vertically out of the slot in the shielding, then lift off the keyboard.

Now the shielding, and there are several little metal lugs which need bending vertically, as well as a few screws holding the shield in place. These need to come off, along with the two screws holding the edge connector protection plate in place. The shield can then be lifted away, revealing the circuit board in all its glory.

Rodent renovation

Even the old mouse can do with an overhaul once in a while, and this only takes ten minutes. Separate the two halves of the moulding by removing the two self-tapping screws from the base. Carefully draw the top forward, away from the two retaining lugs.

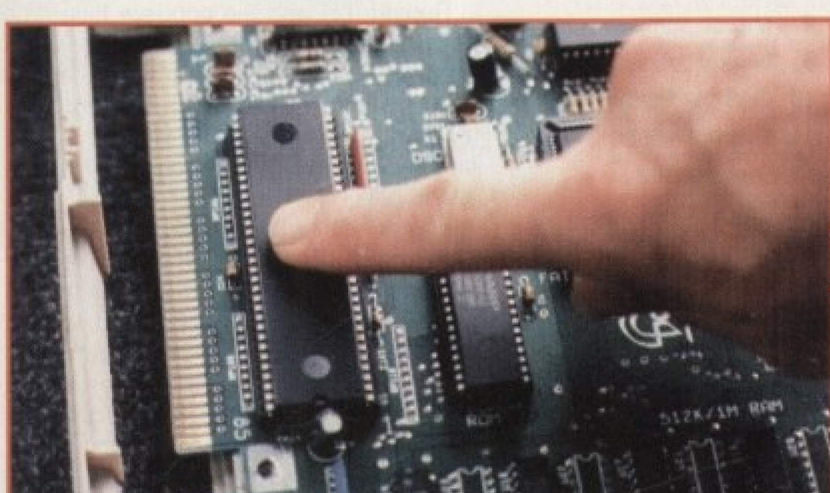
A secondary black moulding holds the x,y rollers onto the circuit board with two further screws. Remove these and you will have good access to the rollers themselves.



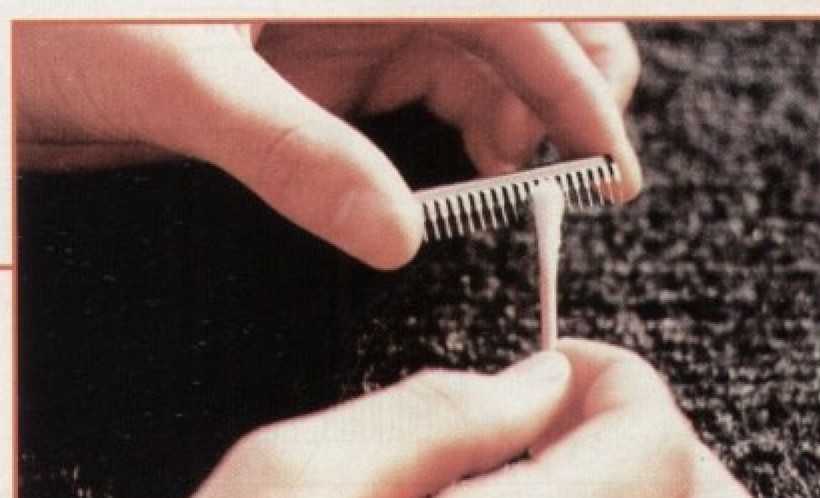
The mouse, minus lid. Look at the muck on the ball and the rollers. Soap and water for the ball, isopropyl alcohol for the rollers. A squirt of WD40 on the micro-switches never goes amiss.

As you can see in the example, these become covered in filth after prolonged use. Wash the mouse ball in hot soapy water. Use Isopropyl alcohol to clean the rollers. You'll get this from a chemist. If one of the mouse micro switches is not working, first try a squirt of WD40, this can work wonders. If this fails, ask your local dealer if he has a faulty old mouse, and offer him peanuts for it.

I've successfully replaced the micro switches on several occasions. It only takes a little care with the soldering iron. You can even check the wires for continuity and if one is gone, replace the whole cable with that from a scrounged bust mouse.



Hot spots are a sure sign of unhealthy performance of ICs, and in particular with the 68000. Localised hot-spots, remember, not general heat over all of the surface.



Using a cotton bud dipped in isopropyl alcohol, wipe both sides of the legs of the IC to remove any contaminants. (Usually coffee!) This can occasionally bring success.

PROBLEM	SUSPECT COMPONENT														
	68000	U6 ROM	U4 DENISE	U3 PAULA	U5 GARY	U7 8520	U8 8520	U15 74LS157	U14 LF347	U37	U38	U39	DRAM	POWER SUPPLY	FAT AGNUS
AUDIO PROBLEM				■					■						
MOUSE/JOYSTICK PROBLEM			■	■		■		■							
PARALLEL PORT PROBLEM						■	■								
SERIAL PORT PROBLEM				■			■				■	■			
NO RT. MOUSE BUTTON				■											
MOUSE AXIAL PROBLEM															
DISK DRIVE PROBLEM	■			■	■	■	■								■
SYSTEM FREEZE			■			■				■					■
NO KEYBOARD RE-SET					■										
GRAPHICS PROBLEM			■												
SCREEN GREEN					■								■		■
SCREEN WHITE				■		■				■					■
SCREEN RED		■													
SCREEN BLACK	■													■	■

Here is your diagnostic table. Follow the fault list down the side until you recognise your problem, or a similarly related problem. Check along the list, and identify the possible culprit.

➤

system, so this conveniently discharges the static.

There are a couple of general tests we can do before looking further into individual components. The first is the IC 'thumbs down'. This is essentially a firm location test, ensuring the IC's are happily planted firmly in their holders. Believe it or not, this represents about 10 per cent of Amiga faults. So, we look around the motherboard of either the 500 or 2000, and identify all of the socketed ICs.

With a thumb at either end of the IC, we apply firm downward pressure to see if it has become dislodged. The power supply can be connected, as well as the keyboard, and the Amiga tested.

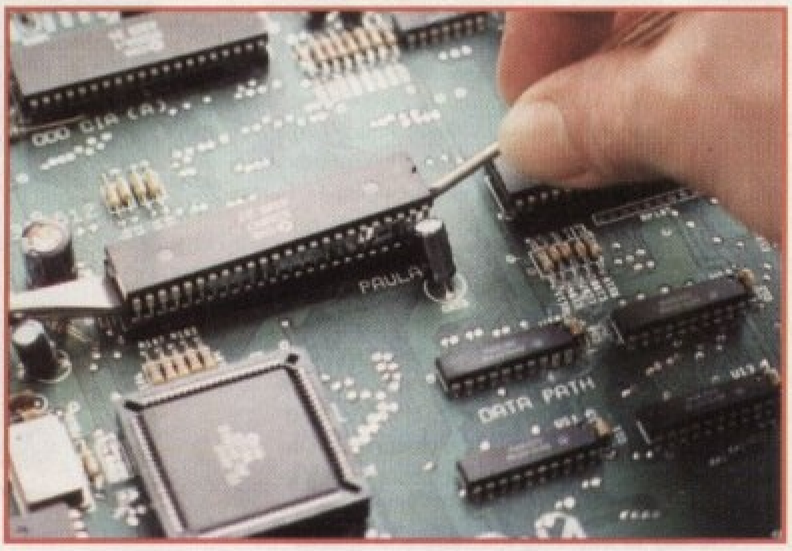
There is no problem trying out the Amiga with the lid off – the motherboard only has two supplies, one of 5 volts and one of 12 volts.

If the thumbs down test didn't work, we can do the general hot-spot test. This needs a little care, unless you have asbestos-tipped fingers.

Connect the power supply to the Amiga, and leave it on for about five minutes. Carefully move over the surface of all the ICs and see if you can feel any localised point of high temperature. By this I do not mean general heat. There is always heat generated by ICs, and in particular by the main processor(68000).

What I refer to is a small localised point over the surface of the IC where there is a considerably higher temperature than elsewhere. If this is the case, then you can feel reasonably confident in suspecting something is a bit dodgy.

You might be exceedingly lucky, and get away with a thorough clean of the legs of the IC, and this is done as per the picture. You will need to be careful removing the ICs from their housings, but don't be too timid, just careful.



Removing an IC involves gently prising each end upwards, with two screwdriver blades. Don't be too shy, they can be stiff, be don't be too rough otherwise you will bend a pin, just as you can see I have done on pin 6.

Once cleaned, the IC needs returning to its socket. Be very careful to ensure the IC is replaced the correct way. This is easily checked by firstly, identifying the semi-circular notch at one end and matching it with the notch illustrated on the motherboard, and secondly, looking to see if all of the pins are offered up accurately to the holes in the socket. It all sounds fiddley and precarious, but believe me it isn't all that difficult, once you've cracked one.

If neither of the two previous tests have worked and we still have no go, then we need to refer to the aforementioned diagnostic chart. Look at the fault and follow along until you see the IC identified as a possible culprit.

The ideal solution is to ask a friend if you can try the suspected ICs out of his or her Amiga, thus identifying by substitution. A word of warning however. If the fault is consequential, in other words if your 68000 is blown because you have a short on your edge-connector, then you will also blow your friends 68000, and popularity might be thin on the ground.

INSTALLING

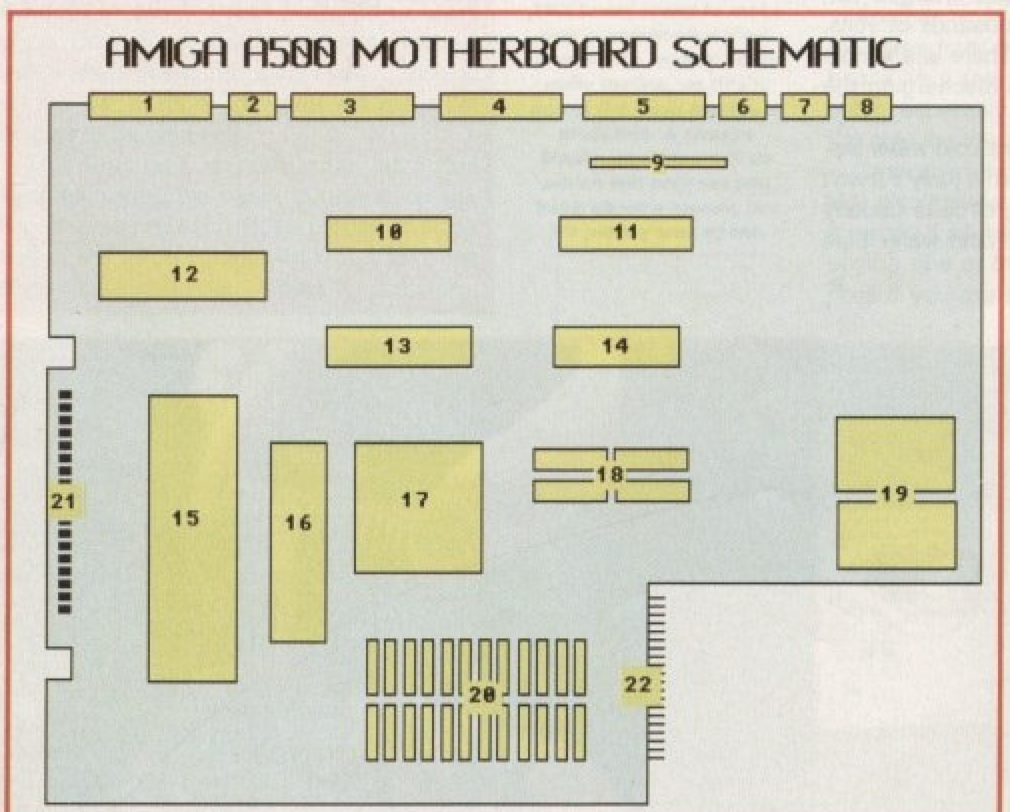
Should you feel confident that your diagnosis is correct, and you have bought a new IC, you must be careful at installation. Firstly, carry out the static discharge procedure before even handling the new IC. Secondly, remove the IC from its packaging and holding it between thumb and middle finger of one hand, lay the legs flat against a resistant surface, such as a table top. Apply gentle pressure to all of the legs, bending them towards the centre of the IC.

Repeat this with the opposite legs. The purpose of this exercise is to create a right angle between the body of the IC and the legs. When they are bought the legs are splayed out and will not fit into the relevant holder. Once completed, plug in and test.

You will either be ecstatic, (maybe even electrostatic!) or disappointed with your attempts. It really gives you a buzz when you fix your Amiga for the first time, and you realise you have saved a packet.

Don't despair if you fail and there are faults which this limited article can only hint at – then you can always admit defeat and toddle off to your dealer.

At least you've had a go, and if nothing else, you know what your Amiga looks like from the inside out! AC

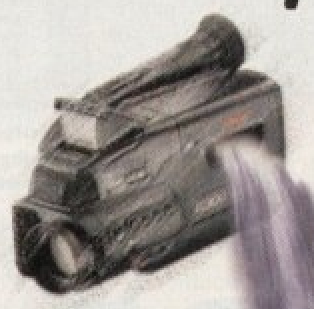


This schematic is used to identify the main ICs on your 500 motherboard. The 2000 has a completely different arrangement, but worry not, the names of the ICs are printed clearly on the motherboard, adjacent to the IC.

IC identification

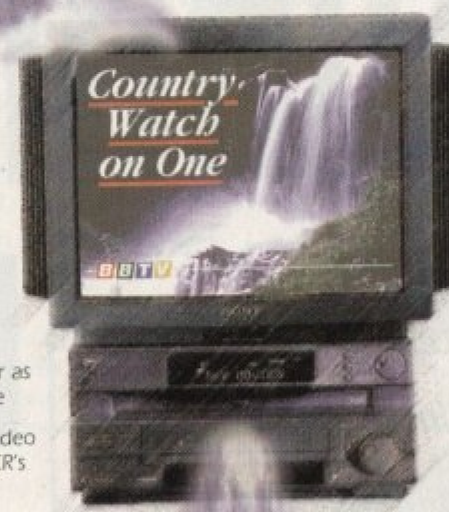
1	Monitor in.
2	Power input
3	Parallel port
4	Serial port
5	External drive
6	Sound output
7	Joystick port
8	Mouse port
9	Floppy connector
10	Odd CIA 8520
11	Even CIA 8520
12	Denise 8362
13	Paula 8364
14	Gary U5
15	68000
16	Kickstart U500
17	Agnus 8370
18	Data path
19	Revision data
20	Dram
21	Edge connector
22	Expansion connector

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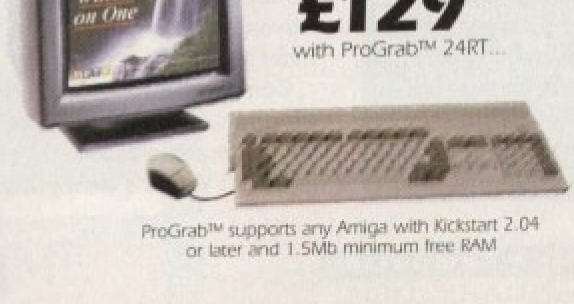
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Winning words?

Hot on the heels of the latest version of Final Writer, Digita strikes back with Wordworth 3.1. Gareth Lofthouse reviews

Once again, the two titans of Amiga word processing are locking horns in a contest for supremacy, with both Digita and Softwood hoping that their latest software updates will give them the edge.

Last month, Final Writer proved itself to be in fine fettle. Now it's Digita's turn to have its champion checked over, as we assess whether enough improvements have been made to keep it in the race.

Like Final Writer 3, Wordworth 3.1 asks a lot from your Amiga. It requires 3Mb of memory and Workbench 2.0 or higher, but at least it's possible to run it off floppy disks whereas Softwood's program requires a hard drive.

Digita is understandably keen to avoid the problems that accompanied the release of Wordworth 3.0. Back then, irritating bugs undermined the potential of an otherwise excellent package.

This time the makers have made assurances that 3.1 has rock-solid reliability, and indeed all the problems of the earlier version appear to have been fixed. Even an early minor complaint about a bug with the Playtime game appears to have been eradicated.

Wordworth 3.1 benefits from increased speed, a welcome inprovement since its predecessor used to drag its heals in some areas. Many functions and tools are quicker, including loading and saving, formatting, find and replace, drawing, CGM handling and printing.

INSTANT

Find and Replace, for example, is 40-times faster, which in practice means the job is done almost instantaneously. In comparison, the same tool on Final Writer appears tardy.

On the other hand, Final Writer appears to be faster when it comes to straightforward text entry. Wordworth kept up with my typing speed well enough, but was not as nifty when it came to moving round the screen to edit.

On-line help has also been improved, a factor that should make Wordworth more attractive to the WP beginner since a Final Writer user must refer to the manual.

It would be better, however, if topics were arranged alphabetically by key words. As it is, the way items are listed is confusing and finding a topic can be unnecessarily time consuming. Another feature pinched from PC word processing is drag and drop editing. This allows the user to move sections of text using the mouse, without having to access menus, thus making for quicker work.

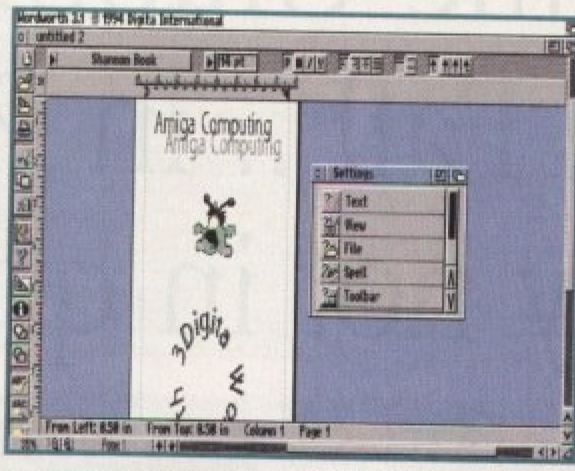
Final Writer has held a reputation for having superior DTP functions, but the new version of Wordworth may reverse the tables. When it comes to importing pictures, for example, 3.1 leaves Writer standing as it can use a much wider range of formats.

Combined with Wordworth's superior text effect tool, this feature makes 3.1 very competitive in the presentation stakes. However, I prefer Final Writer's newly enhanced drawing tools. Additional tweaks include an option for Landscape or sideways printing and a facility allowing users to print EPS scalable graphics with non-PostScript printers (hard disk only).

These refinements compliment a package that, with its bugs sorted out, was already very impressive. Behind all the advanced presentation features there was always a powerful word manipulator.

For example, Wordworth, like Final Writer, incorporates the Collins dictionary and thesaurus. It also has an auto-correct feature which will actually fix spelling mistakes as you type.

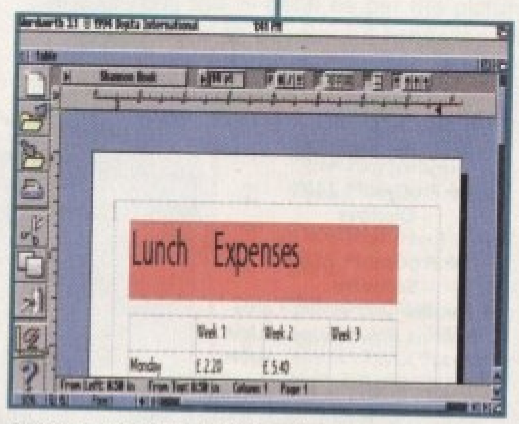
Equally important is the table creation tool allowing users to present numerical data as part of a document. This is a powerful feature completely absent in Final Writer.



Nothing beats Wordworth when it comes to bendy text effects – though how useful this is to your average user is another matter



Powerful control over page layout includes contoured text flow for that professional touch



WW 3.1 retains the advantage over Final Writer with its Table Creator

The final result

As the smoke of the battle clears, it's time for me to stick my neck out and choose a victor. Each package has an illustrious history and a close finish is always to be expected between the two.

Still faster in general use and possessing more flexible drawing tools, Final Writer 3 deserves loyal support from its fans. However, in general, Wordworth now possesses stronger features.

Money at first appears to be a big consideration, since Wordworth's RRP is twice that of Softwood's offering. However, 3.1 actually has a typical street price of about £80.

Wordworth is now stronger than ever and looks well positioned to take on any rival bar none. Final Writer 3 is a great WP package, but for my money this round goes to Digita.

The bottom line

Product: Wordworth 3.1
Supplier: Digita International
Tel: 01 395 270273
Price: £149 RRP

Ease of use	9
Implementation	9
Value for money	8
Overall	9

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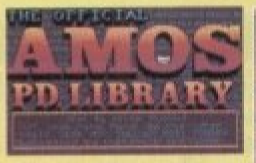
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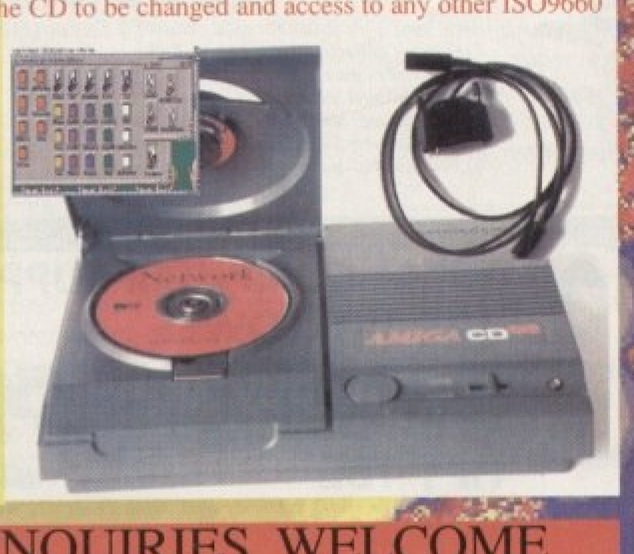
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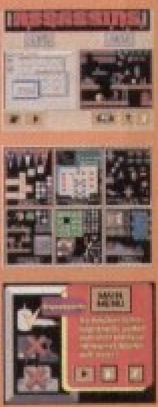
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Art for arts sake



star letter

For some time I have been growing increasingly disenchanted with *Amiga Computing*, for a number of reasons:

The indiscriminate use of irrelevant electronic symbols linking text and headings. To anyone with the slightest knowledge of electronics, the apparent random use of symbols such as a battery, a transistor, a capacitor or other components when completely irrelevant to the text, is simply nonsense and misleading.

The typeface generally used for the headings is also irritating, and interrupts smooth reading. X and H appear very similar, to mention but one detail, and the whole affect is most unattractive.

In addition, the arrival of the December issue in mid-October seems utterly ridiculous.

Your review of PageStream 3 makes me wonder whether I am using the same program. When my copy arrived a couple of weeks ago it was a disaster, to put it mildly, although after two updates taken from the net it is certainly a little better.

I note that the list of improvements in version 3.0b takes four pages to list! Incidentally, Soft-Logik charged me for version 3 last May, although it wasn't delivered until October.

I have been using PageStream with various updates for some years and have found it excellent until version 3, but surely your marks in 'the bottom Line' are somewhat over-enthusiastic to say the least.

Your comments, and those of one or two others, make me wonder whether the version 3 sent out by Soft-Logik to those of us who ordered the update to v2.2 is actually the same as version 3 sent to those who purchased it new.

Obviously I can only sympathies with your apparent phobia towards what you describe as irrelevant electronic symbolism. We, on other hand, prefer to call it design style...

Unlike the vast majority of computer titles, *Amiga Computing* is lucky enough to employ an Art Editor who actually merits the title.

I can appreciate that certain elements of our layout may not suit everybody's taste, however that's a risk that has to be taken if you're trying to create something which does more than simply ape the opposition.

Obviously, the magazine is primarily a service for the readership, and if the majority want a change that's exactly what will happen.

But as it stands, all our market research points to the fact that the majority appreciate our attempts to offer more than straight facsimile of all too familiar design philosophy.

As for your questions concerning our PageStream review, I'll now pass you over to the man responsible, Mr Denny Atkin: "I understand some people were confused by my high rating of PageStream 3.0. It's true that the initial release of the program was a bit disastrous. However, by the time I finished my review, version 3.0a was out, fixing the major bugs in the version 3.0 examined by some other reviewers.

"As this is written, Soft-Logik has released version 3.0c, fixing known bugs and implementing many missing features. They plan a few more updates – all of which are available on-line – and once everything's together they'll send registered users a free update with all the bug fixes and added features.

"I prefaced my review with mention that Soft-Logik hadn't quite finished the job on PageStream 3.0. Unfinished though it may be, it's quite usable from version 3.0a on, and it's by far the most powerful, professional DTP package available for the Amiga, even if its not-quite-fully-baked form.

"My high ratings were in part based upon what I expect from the finished version – which will be free to all PageStream purchasers.

"Soft-Logik has a proven track record over the past five years of providing Amiga users with free updates and enhancements to the PageStream product, and I have no doubt they'll come through again.

"The proof is in the functionality of the program, though. I've started to use PageStream 3.0 to lay out an updated version of my Amiga tips book, and I wouldn't go back to PageStream 2.22 or ProPage – or even PageMaker on my PC, for that matter.

"I hope the above helps to clarify the situation. In retrospect, I should have lowered those ratings. I was under the assumption they'd get the final version out much more quickly – had I known it would take this long I would have rated on the version as it stood, instead of what I expected to be available when the article went to print."

Denny Atkin
Freelance journalist

Cause to complain

I wish to make a complaint! I have one more magazine then my subscription will be complete. Quite honestly, if I was buying each month I would not have chosen *Amiga Computing* – why? Because I have an A500 running Workbench 1.3, so most of the CoverDisk's, apart from a couple, have not been used during my 12-month subscription.

I didn't cancel because I thought maybe, just maybe, next month's issue would be compatible. Unfortunately you never advise what the next issue and disks are going to be.

But now just when my subscription is about to end it appears you're finally getting it together and including something for everyone – aaarrrgh! I feel very grumpy and just had to write. I'll never take out a subscription again – unless I get an updated Amiga and more memory. However there's a fat chance of that because I'm a student and my husband has been unemployed for several years.

I understand your annoyance at the lack of 1.3 compatible software on the CoverDisk, but to be quite honest the reason is that nobody writes 1.3 compatible software any longer. PD and Shareware authors have moved on to later versions of the OS just like almost everyone else.

Although I sympathise, the only thing I can suggest is to start saving, as the situation is only going to get worse. Workbench 1.3 is quite literally years out of date.

As for your comment about an improvement of recent issues, I assume you're referring to an increase in the game demos. I'd be particularly interested in the opinions of other readers as to whether they'd prefer more game demos or productivity software.

But coming back to the original question of 1.3 compatible programs, the only thing I can say is that we'll continue to do our best – but with ever shrinking availability, that may still not be enough for many of the Amiga old guard

Your number's up

My request is a simple one. Could you please publish the required serial number for the Publisher Program from the February 1994 CoverDisk as the magazine has been lost, or done a runner in some way.

Without this code I haven't even got as far as loading it yet alone producing anything with it.

Your wish is my command, and the mysterious number in question is; 6547495F. I hope you can now have hours of fun...

That same old story

I would like to fully endorse what Mr W D Evans says in his letter in last month's ESP about the way he has been treated by WTS Electronics and I too warn people against having anything to do with them.

In May this year I purchased a 120 Meg hard drive for £160 from Computer Mall's stand at the Amiga Computing/ Gasteiner Spotlight on Amiga/Atari show at the Novotel, London.

The drive was faulty, so I sent it back to Computer Mall by recorded delivery. That was on 31 May. Since then they have claimed to have lost records of receiving it, then they claimed they had not received it, and now they claim they never sold it to me in the first place. All this in spite of the fact that I have a receipt, a recorded delivery receipt, a copy of the recorded delivery card signed on delivery to Computer Mall and even a letter from the post office confirming delivery to Computer Mall's address.

In September I sent a letter addressed to Computer Mall's manager Mr Jimmy O'Connor enclosing copies of all the above documents and repeating my demand that they refund my money. The reply I received has an illegible signature and instead of the sender's name printed below it, there are the words "For and on behalf of Computer Mall." To all intents and purposes this letter is anonymous.

In the letter, Computer Mall claims my receipt is invalid because it is undated and does not bear my name and address. Well it is not my fault they forgot to date the receipt and as far as I am aware, there is no law which says a receipt must bear the customers name and address to be valid.

Computer Mall also claims that it does not employ anyone with the initials DC which are shown on the receipt as those of the sales person. I watched a member of Computer Mall's staff complete this receipt, and if these are not his initials then he has deliberately falsified it.

It also says that the signature on the proof of delivery is not that of the manager, J O'Connor. However, Computer Mall does not say that it is not the signature of any member of staff, past or present. I say this because it originally claimed that it had lost the record of my drive being received when the previous manager had been sacked and taken his records with him.

It even points out that the proof of delivery does not bear the address that it was delivered to, despite the fact that this information is on the recorded delivery receipt and the letter from the post office, both of which bear the same reference number and of which I enclose copies.

I completely agree with Mr Evans that WTS/Computer Mall is downright dishonest, but I do not agree that it is inefficient. In my opinion, it is very careful and calculating.

Paul McKinley, Hackney

The above letter is just a tiny sample of the mail received in reference to the exploits of WTS. In fact the response has been so large I'd like to ask all other irate WTS customers to vent their spleen in the direction of the trading standards and the small claims court.

Got something to say through the pages of AC? Ezra Surf is our mailman, dedicated to reading your letters and selecting the most interesting for publication. Drop him a line at:

Ezra Surf's Postbag, Amiga Computing Adlington Park, Macclesfield SK10 4NP

Please don't enclose saes as Ezra just hasn't got enough paper to reply personally. He might also have to shorten your letters, so don't be offended if you end up getting the chop.

Marvellous mystery of..?

I, and I assume many others, very much enjoyed the magazine's recent round-up of serious CDs entitled "Reams of Rom".

However, it must be said I do have one major complaint concerning the aforementioned round-up – where was the encyclopaedia CD? Surely there's at least one on the market, and if so I'd imagine it to be one of the most popular CD titles on the shelf.

I'm getting just a bit fed up with hearing how wonderful it is to have all that information at your fingertips by people desperately trying to justify investing in a PC, which otherwise they're thoroughly disappointed with.

Surely there must be something similar out on the Amiga, and if not, why not?

Dave Prestwick, Cheshire

It's true that there is an encyclopaedia CD available on the Amiga, but unfortunately I'm fairly certain it will fall far short of the sort of thing you're after. If memory serves, the CD was entitled the Hutchinson's CD encyclopaedia – or something similar – and was released way back in the days of the CDTV as a demo/promotional tool.

Unfortunately, since those early days of multimedia, presentation has moved on a very long way, and as a result it now looks very sad indeed in relation to modern releases.

What's needed is for some entrepreneurial type to buy up the rights on one of the countless PC encyclopaedias and re-master it onto the Amiga.

Although seemingly a mammoth task it should in theory be relatively simple, especially if targeted towards AGA machines such as the CD32, A1200 and A4000 – as all of the above can easily support the 256 colour palettes often used to add a little glamour to PC CD.

If, or should I say when, this much needed conversion occurs, rest assured *AC* will be the first to put the product in print.

Plea for help

I am a 72-year old disabled pensioner, and have just moved to a sheltered flat. I have an Amiga 1000 and after the move into the flat I can't find the instruction book for my computer.

I wonder if you can help me on where I could get an instruction book or a photocopy, as I am lost without the instructions.

I would be very grateful for any help as computing is one of my favourite pastimes.

Mr H M Dunn, Blackpool

Unfortunately *Amiga Computing* doesn't have access to an A1000, or indeed any documentation. As a result, here's a great opportunity for a philanthropic A1000 owner to do their good deed for the day.

If anybody can help, please get in touch with *AC* direct and we'll pass the necessary documents on to Mr Dunn.

Straw pole

Although *Amiga Computing* is already available via the Internet, CIX and CompuServe we're also considering setting up a dedicated BBS's, thereby allowing near instantaneous feedback from the readers regarding all aspects of the magazines.

This would also have the added bonus of providing much greater access to CoverDisk material, software patches, and the assorted PD and shareware programs and script files associated with the magazine – without incurring the fees associated with commercial BBSs.

Obviously, setting-up a board would require a fair amount of effort, and as a result I'd appreciate some feedback, not only to determine the viability of the idea but also what kind of on-line services you would like to see.

If you have any thoughts whether positive or negative please write to the usual address or e-mail us direct via the on-line services listed below:

CompuServe: 70007,4734
Cix: amigacomputing
Internet: amigacomputing@cix.compulink.co.uk

Oops, sorry!

Due to the wonders of science, the superb black filing system under the desk of Ezra Surf has been mysteriously cleansed and some of the letters detailed above have disappeared. Consequently, we cannot credit any of the above letters with the right authors. He apologises deeply for any inconvenience caused to the scribers, and if they wish for their names to be printed please write to him at the printed address and they will be published next month.



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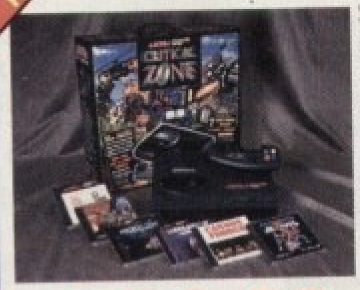
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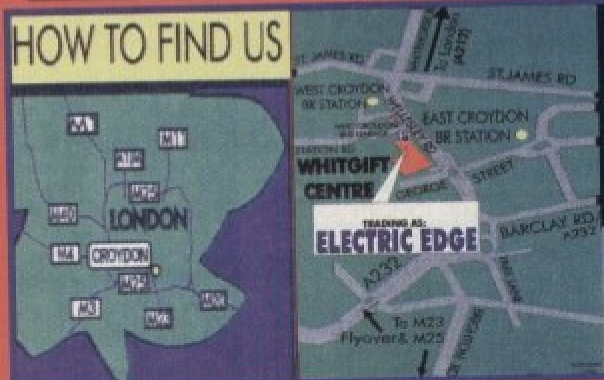
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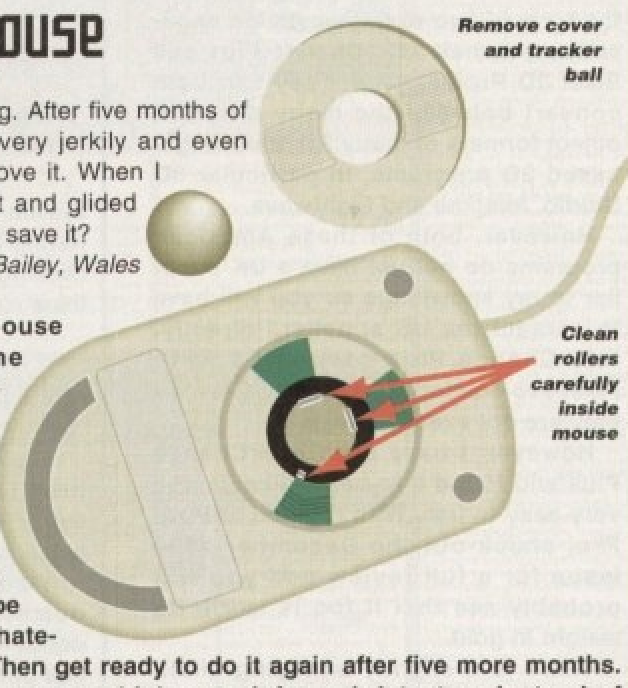
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Erratic mouse

I think my mouse is dying. After five months of use, it is now moving very jerkily and even feels 'lumpy' when I move it. When I first got it, it was perfect and glided smoothly along. What can I do to save it?

R. Bailey, Wales



Yours is a common mouse problem. Inside the mouse are three stainless steel (usually) rollers. Gradually, dirt builds up on these rollers and is the cause of the 'lumpy' feel and erratic movement.

Open up your mouse and, armed with something to scrape with (small screwdriver or whatever), scrape away the grime. Then get ready to do it again after five more months. Alternatively, buy an optical mouse which uses infra red detectors instead of rollers.

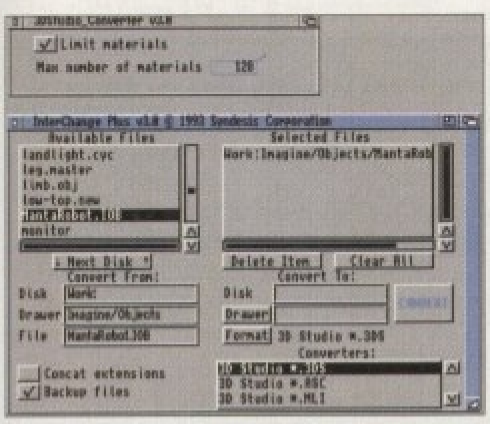
3D swap shop

I have an Amiga 4000 which I recently bought in order to persue my interest in 3D rendering and animation. I currently have Imagine 3 and am quite pleased with it.

I share my interest with a friend who lives locally and who owns a PC and uses 3D Studio from Autodesk. We regularly get together to discuss various techniques and generally to pick each others brains on 3D modelling in general. I would like to be able to share object files with my friend but, being rather new to the Amiga, I'm not sure what we would need to convert files for use between both the different computers and between Imagine and 3D Studio.

Please could you suggest a suitable setup for easy and painless conversions?

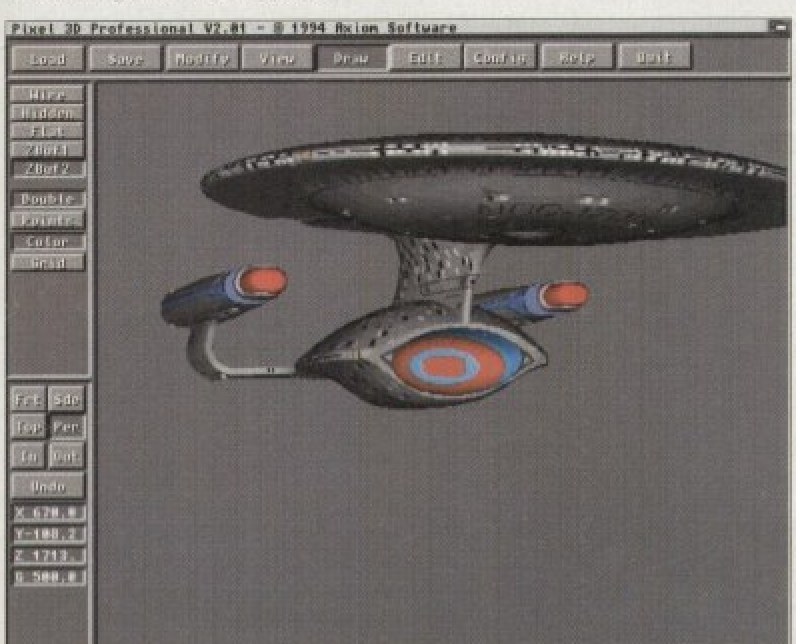
W. Whiteley, Suffolk



On the slightly more affordable side, but still a downright invaluable conversion tool, comes interChange Plus from Syndesis

Your first obstacle, that of being able to read each others disks, is easily overcome. The Amiga's operating system, Workbench, has the ability to support MSDOS formatted disks through the use of the supplied PC0 DOS driver.

This can be found in the DOSDrivers drawer within the Storage drawer. It must be copied to the similarly named ➤



Although it will burn a $299 hole in your pocket, Pixel 3D Professional is probably the best 3D object utility available for the Amiga



acas

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Reader help

In reply to P. Mense's letter printed in the December issue of *Amiga Computing* concerning his hard drive turning off during use, I too had a similar problem with my Connor drive.

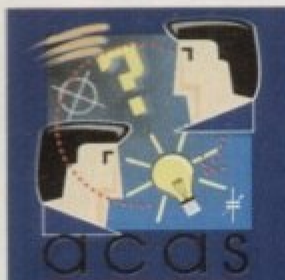
My problem was with a poor connection from the Amiga's internal power supply and not a drive fault. I cured the problem by securing the leads in place using some electrical tape.

I hope this is of some use to Mr Mense. As for any questions of my own, I find your ACAS section answers them without me having to write in. Keep it up.

Phill Blaynesy, Sully, South Glamorgan

Thanks for the suggestion. I'm sure Mr Mense is at this very moment scouring the household for a screwdriver and some electrical tape to test your theory.

As ever, we welcome any hints and tips from those who have been plagued by problems and have overcome them. Send them in to the ACAS address printed on these very pages.



Do you have a problem? Do you sometimes find yourself poised over your Amiga with axe in hand, spouting profanity at the stubborn refusal of your Amiga software or hardware to behave properly?

Well, calm down and swap the axe for pen and paper, jot down your problems, along with a thorough description of your Amiga setup, and send it off to Amiga Computing Advice Service, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP.

Any questions?

➤

DOSDrivers drawer within the Devs drawer. This ensures that when you switch on your Amiga the driver is loaded automatically, allowing your machine to both read and format MSDOS disks.

The tricky part is the conversion of 3D object files between 3D Studio and Imagine. They both share a tenous link in the form of DXF files. DXF files are native to AutoCAD, a program from the makers of 3D Studio.

3D Studio and Imagine 3 both support DXF files, although Imagine's version is less than robust and you will probably encounter problems. A far superior method of conversion is available in the form of two excellent Amiga applications, namely InterChange Plus and Pixel 3D Professional. They can both convert between the many different object formats of many PC and Amiga-based 3D programs, in particular 3D Studio, Imagine and Lightwave.

However, both of these American programs do not yet have a UK supplier to my knowledge so you will have to contact the US suppliers directly. InterChange Plus costs $199, with Pixel Pro coming in at a hefty $299, so they are not exactly cheap.

However, I have used InterChange Plus and found it to be invaluable and very easy to use. With regards to Pixel Pro, check out the December 1994 issue for a full review and you will probably see that it too is worth its weight in gold.

There is a slightly annoying glitch with InterChange Plus in that it doesn't seem to handle face normals properly. Face normals are vectors which describe which way a face is pointing.

After loading an Imagine object file into 3D Studio after converting it to a .3DS file, the object was very messy. From what I can gather, the face normals were incorrectly interpreted and every other face seemed to have been flipped.

Luckily, 3D Studio has a Unify command in one of the many menus (your friend will have to look it up in his manual as it's been some time since I used 3D Studio) which sorts everything out.

For information on InterChange Plus, contact Syndesis Corporation on 0101 414 674 5200. Pixel 3D Professional is available from Axiom Software who can be contacted on 0101 612 894 0596 or you can fax them on 0101 612 894 1127

No click please

After three months of owning my Amiga 1200, and eventually converting to a hard drive driven system, I am now getting really fed up at having to endure the noise of the drive clicking when there's no disk in it. Is there some way I can turn it off?

P. Buckley, Northampton

Sooner or later, every new owner with a hard drive-based system starts to fall prey to the dreaded drive clicking syndrome. However, there is a cure and it's called NClick.

It's available from most public domain libraries and there are no doubt many more drive silencing utilities out there too.

Frequency frustration

I have an A1200 with an 030 accelerator and 4Mb of RAM. Recently, my Philips monitor has died on me. Every time I turn it on, a high-pitched whining noise emanates from it. I suspect it's just worn out, as I've had it for some time. Needless to say, I get diddly squat on the screen when I switch on the A1200.

No problem, I thought, I'll just ask Dad to lend me his spare PC monitor. After much cajoling, Dad finally agreed to loan me his fancy multiscan.

This is where the problems started. I first had to get a VGA adaptor so I could plug the monitor into the Amiga's video port. So, off I went to my local computer store to buy one.

After plugging the monitor in and expecting to be back in business doing the great things you can do with an A1200, I was gobsmacked to find that the display which appeared on the monitor was a total mess, with wavy lines everywhere. I could just make out some icons, but they were very distorted and I could see two mouse pointers too.

What's happening and how do I get the multiscan to work with my A1200? I thought that the AGA chipset could handle VGA's and multiscans.

I. Hadley, Shropshire

The A1200 certainly can handle VGAs and multiscans. You're problem is with the A1200's current screen mode setting, which is probably still set to PAL high res.

I would guess that your Dad's multiscan can't "sync down" to the horizontal frequency of 15.60KHz, and has a minimum horizontal frequency of 31.44KHz, as most PC monitors do.

This totally throws out the timing and hence you have a horrendously garbled display. You are now in one of those catch 22 situations. You need to run the ScreenMode utility in the preferences drawer to change the screen settings, but you can't because the display is too messed up to see what you're doing.

I suggest you temporarily dig out your TV lead which came with the A1200 and plug it into your TV so you can get a normal display to change your screen preferences.

If you can't find your TV lead, you can use your audio leads to connect the composite video output of the A1200 to a composite video-in socket on a TV or video recorder – if they have phono composite video inputs that is.

Once you have Workbench on screen, go to the Storage drawer and then into the Monitors drawer. Copy the Multiscan and VGAOnly icons into the Monitors drawer within the Devs drawer and reboot your A1200.

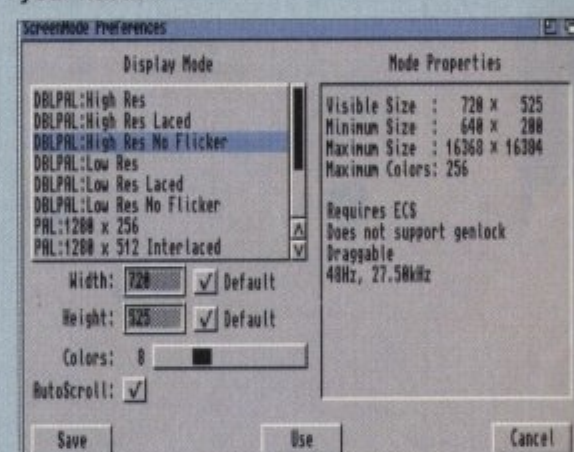
After you have rebooted, run the ScreenMode utility in the Prefs drawer and you should find that you can now choose a multiscan mode.

Select this and move your mouse pointer to the Save button, but don't click on it yet. I now suggest you switch off your TV or unplug the video lead of your A1200 because clicking on Save immediately changes the display frequency to that for a multiscan. Your TV may not like being given the 31.44KHz frequency and may possibly be damaged.

Once unplugged, click the mouse button to save your new screen mode, connect your Dad's multiscan monitor to your A1200 again and reboot – you should now have a stable picture again. If not, you may have inadvertently moved the mouse pointer off the Save button before you clicked, and therefore did not save the change.

One thing to bear in mind when using monitors that use 31.44KHz is that most games will not like this mode. They are mainly designed to work on monitors like your Philips, sometimes referred to as RGB monitors, which operate at 15.60KHz.

If you play games regularly, you will have to buy a monitor to replace your now defunct Philips or shop around for a multiscan which can handle horizontal frequenices between 15.60 and 31.44KHz. Check out our advertisers who can advise you on a suitable monitor for your needs.



If you ever upgrade your monitor, remember to use the ScreenMode utility in the Prefs drawer to get the most from it

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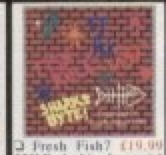
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❑ ^+ V1261 Games 5-8 .... (4)
❑ ^+ V1338 Games 9-12 .. (4)
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❑ ^ + V16 AQUARIUM Turns your screen into an eyecatching Fish tank.
❑ ^ + V298 NORTHC v1.3 Complete C language with all files needed (2)
❑ ^ + V523 DICE C COMPILER Matthew Dillons full featured powerful C compiler & environment system. Complete C language (2)
❑ ^ + V536 CATALOGUES A collection of utilities used to Catalog all your disks/Videotapes and audio tape collections (2)
❑ ^ + V575 HOME BUSINESS Based on word processing, Data Management, Spreadsheets, Accounts & Printing. (6)
❑ ^ + V662 DCOPY v3.1 PRO You can select the speed of the disk drive, Copy modes, Dos, Nibcopy, Ver & safecopy.
❑ ^ + F691 PRO C MANUAL v3.0 documents & examples for C. It consists of six manuals, with over 40 chapters (5)
❑ ^ + V786 PASCAL Everything needed to program in Pascal.
❑ ^ + V794 GRINDER Complete graphic conversion package that supports GIF, JPeg, Atari St, PCX, Targa, TIFF, Ham-E and IFF Formats.
❑ ! - V817 A500P EMULATOR As it sounds will let v1.3 / v1.2 owners run WB v2.x+ software WITH-OUT any need to purchase the Workbench v2.x chips.
❑ ^ + V821 SNOOPDOS v3.0 Monitors Dos calls to see what library, devices, fonts are required if a program won't load
❑ ^ + V928 LITTLE OFFICE Has a Word Processor and others programs to aid a small business or company.
❑ ^ + V979 NCOMM v3.2k Is a commu-unications program based on Comm v1.34 with lots of very nice enhancements
❑ ^ * V1017 POST v1.86 An excellent Postscript interpreter for the Amiga which implements the full Adobe language (3)
❑ ^ ^ V1021 (AGA) SCREENS Enhance your Workbench disks with backgrounds like these's. All pictures in full AGA colour.
❑ ^ + V1022 LITTLE TRAVELLER Shows a worldmap. You can select any country for travel information, Zoom up another map with detail.
❑ ^ + V1039 HARD DISK INSTALL If you need to install your A1200 HD then you need this set of disks which can do a low-level format and then install WB 3.0 (2)
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❑ ^ * V1095 THE DEGRADERS If you have trouble running software on an A1200 or A4000/030/040 give this disk a try it will emulate the basic 1.3 rom better that any other software on the Amiga at present.
❑ ^ + V1109 STAR VIEW Is designed to show graphically the positions of the stars and planets from any point on Earth.
❑ ^ + V1110 FORCAST v2.01b Is a Horse Racing prediction program which uses statistical analysis of Major factors.
❑ ^ + V1114 PRINT LABELs DocDump2.1, Envelope Print v1.2, Inlay Maker v1.4, MCmaster v1.1, Banner Press, Label Print
❑ ^ * V1136 DISKSALV 2v11.31 is a disk structure, file repair come salvage or undelete util. HDClick, is a hard drive menu.
❑ ^ + V1137 (AGA) UTLs 4 [illegible]
❑ ^ + V1164 (AGA) A1200 FIX DISK Contains all what you would need for getting disks to work on your new A1200. [illegible]
❑ ^ + V1178 KS 3 EMULATOR This disk is a multi kickstart selection utility disk. You can select Kickstart 1.3 (34.005) Kickstart machine (as it is) Kickstart 3.0
❑ ^ + V1179 FILE-O-FAX Designed for you to work at your own leisure without worrying about forgetting those important meetings, or names, address, tel Number's ect.
❑ ^ + V1196 DESKTOP VIDEO Is a disk with making and editing your very own video master pieces. Excellent software.
❑ ^ + V1200 MAGIC W/B Is a selection of icons or items to enhance your Workbench screen and enviroments.
❑ ^ + V1207 OCTASTUFF A new collection of utilities come samples come modules for use with the famous OctaMED
❑ ^ + V1209 GNU C++ COMPILER Requires: HD 6Mb+, Disks consists of the latest version of the GCC environment, The compiler, driver, assembler, linker, header files, inline code generation of libraries. (3)
❑ ^ + V1213 PROGRAMMING Contains the Programming languages like, Ace, AmigaE, AmigaEdo, SBProlog, BCPL4AML, EGUL, Pascal and others (3)
❑ ^ + V1219 THE AREXX GUIDE Full Amiga Guide document to teach you Arexx!! Tip filled with easy cross referencing.
❑ ^ ^ V1221 (AGA) BLANKER BlitzBlanker has 14 different blankers all ready to show off your AGA machine!.
❑ ^ + V1222 PANASONIC STUDIO Special printer Preferences editor and driver system for all Panasonic 9 & 24 pin printers.
❑ ^ + V1223 CANON STUDIO 2 Printer Preferences editor and driver system for 800&880, LBP A1-2, BJC800, BJ510-130.
❑ ^ * V1227 GADTOOLS v2.2c Contains a collection of tharded libraries intended to provide programmers with new GadTools
❑ ^ + V1236 INVOICE PRINTER Will print invoices onto your letterheads. Much sort after. Ideally suited to a small business.
❑ ^ + V1242 RE-ORG v3.11 is a fast shareware disk optimizer for AmigaDOS.
❑ ^ + V1243 IMAGE 2.0 OBJS Volumes 4 to 7 packed to bursting point of Images for use with that amazing program Image. (4)
❑ ^ + V1247 TEXTURE MAPS in 320x200 JPEG format for use with any rendering programs, textures like Organic, Miscellaneous, Stone, Wood etc. (3)
❑ ^ + V1250 SOLDERING Contains many useful tools for drawing good quality circuit diagrams, and also vero-board (strip board/solderboard) lay-outs, complete system.
❑ ^ + V1269 OCTAMED TUTOR A simple guide through the basics of this excellent music program. From OctaMED 3.x upwards
❑ ^ * V1277 STAR STUDIO Printer driver for controlling any printer printer.
❑ ^ + V1278 MAIL-O-DEX An excellent way to keep names, addresses, Phone numbers, ect & then print them out.
❑ ^ + V1279 PRINT-A-CARD Want to print a business card or any other type of card then this is the software for you.
❑ ^ + V1280 DIVIDEND WINNER a pools prediction aid which will advise which numbers to enter on your coupon based on sequence prediction.
❑ ^ + V1282 FOOTY v1.9 sit back with your mouse-mat on your lap & keep track of whats happening in the leagues.
❑ ^ + V1286 PRINTER DRIVERS Now also contains the program called sid for easy installation of the Printer Drivers.
❑ ^ + V1303 SCALA PICTURES Pictures in 736x580 16 colour format for use with The program Scala. Theres about 15 pics in total and are very sharp indeed. (2)
❑ ^ + V1305 THE V.W.S v4.0 VIRUS WORKSHOP. Was produced to get rid of all the viruses around. Takes over where BootX left off.
❑ ^ * V1307 NETWORKING (3) Contains utilities to help aid in Networking your Amigas like AmigaNOS, DNet, Par/SerNet, also contains various update devices and libs.
❑ ^ * V1310 GUIDES Contains AGAGuide, which gives full Amiga Guide information and LibsGuide is a Guide to the Amiga Libraries, find almost every Library.
❑ ^ + V1311 CD ROM Contains a selection of CD Rom related utilities like CDTV Player v2.2, PlayCDDA, ReadCDTV.
❑ ^ * V1313 GBLANKER v2.7 Is a complete modular screen blanker package designed with DOS 2.04 or better in Mind. 14 Different Blankers and a message system.
❑ ^ ^ V1318 (AGA) SWERVE Is a selection of images for use as backdrops all are in maximum overscan for best results.
❑ ^ + V1319 MAXIFLIFE Enables you to take complete control over your finances. SPENDWIZE is a tool to assist you in maximising your return from your [illegible]
❑ ^ + V1321 EDWORD PRO v4.1 [illegible]
❑ ^ + V1326 COMMANDS & LIBS [illegible]
❑ ^ ^ V1330 (AGA) COLLECTION [illegible]
❑ ^ + V1335 LIBS & DATATYPES [illegible] right upto date and just waiting for you.
❑ ^ ^ V1336 BBC EMULATOR Special commands to allows using files to be transfered from a BBC with DFS by means of a cable. BBCs RS423 port to Amiga RS232
❑ ^ + V1354 FIVE STAR v1.0 A powerful prediction tool for LOTTO, POOLS, SWEEP, DIGIT and HORSE (races)
❑ ^ + V1356 NOERRORS v1.3 Function is to hide physical disk errors from floppy disks and hard disks, so these disks can then be used without showing read/write errors.
❑ ^ + V1357 CITIZON MANAGER Superb prints that, have been tailored to suit the Citizen range of printers.
❑ ^ + V1358 10 OUT OF 10 MATHS is a suite of six educational games designed to help children get to grips with 36 specific topics.
❑ ^ + V1359 EPU v1.4 Double your hard drive capacity by installing EPU. After installing EPU to any Device (HardDisk, Floppy, Rad etc) every file which will be written to the device will be compressed and when any compressed file is read it will be autmaticaly decompresed.
❑ ^ * V1360 WB 2.0 TUTORIAL If you are new to the Amiga - WELCOME! There is a lot more options open to you than just playing games. Breaks down the makings of Workbench & make them more understandable to the user.
❑ ^ ^ V1361 (AGA) 16-COL ICONS These icons were beautifully drawn by Roger McVey, and I must add that the originals are the best icons I have seen on any system.
❑ ^ + V1362 CHECKER TOOLBOX Incredible Amiga diagnosis program. Runs self tests on all chips, all the ports and even the disk drive! All your hardware is tested and displayed in graphical information. Every Amiga owner should have a copy! Find out what is wrong with your Amiga before going to the repairers to get it fixed. It may save you a bob or two!.
❑ ^ * V1363 AD&D ASSISTANT play-time dungeon master's assistant and CHARGEN.GUIDE v1.0
❑ ^ + V1367 CHEQUE-MATE! v1.0 Will help you control your personal finances. Enter details about cheques, salary, direct debits.
❑ ^ ^ V1369 ENCRYPALGORITHM The Rivest-Shamir-Adleman encryption algorithm is one of several recently developed techniques for encryption which put immensely secure encryption within reach of the home computer user. Non-AGA V1368
❑ ^ ^ V1371 (AGA) ASI FIX DISK II utilities to reclaim lost hard drives, files and check-sum errors, software like AGAFixes, ForceVGA, KillVGA, RunLame, RunPAL v1.1, ScreenModeChanger and Shutup
❑ ^ + V1384 HOW TO CODE IN C Covers Debugging, Intution & Grafik, Kodbibliotek, Tips, Tricks, AmopaAsm FranC, DosIntuition, Workbench-start, DMake, GadToolsBox + Power Source. (2)
❑ ^ + V1393 STEREOSCOPIC v2.4 is a simple package that allows you to create 3D Stereograms. Use any background.
❑ ^ + V1394 CD-READER v1.1 is based around the parnet networking system and uses the standard parnet cable if you do not have we can send you one for £9.99.
❑ ^ + V1400 3D STEROGRAM 3dPicture Show. All images are 3d stereograms.
❑ ^ + V1404 DMS v2.03 The Device Masher system will compatch a complete disk to a single file on your hard drive. Excellent for backing up software disks.
❑ ^ + V1405 VIRTUAL UTILS Contains five utilities containing everything needed for any Amiga user to make virtual memory from their hard drive. The Amiga is fooled into thinking it has massive amounts of RAM when really it only has a small amount.
❑ ^ + V1416 EYE OF THE BEHOLDER Utilities like end of level saved game file, Special guests explanation, Character Editor, Eye of the Beholder Solution.
❑ ^ + V1417 BANNER V1.5 A smart character rendering utility for - surprise - banners. SNOOPY v2.0 Enables you to monitor library function calls of any library you wish.
❑ ^ + V1418 VIDEO TEST SYSTEM is a collection of 20 test patterns (displayable with any IFF animation viewer) that can be used to evaluate monitors, TV sets, VCRs, and other NTSC video equipment.
❑ ^ + V1420 SIGNITUR CREATOR The Deluxe Signature and Coat of Arms Creator You get a selection of letters for use in your new signiture.
❑ ^ + V1422 BANK MANAGER The trouble with statements is that they only tell you what you have spent after its gone.
❑ ^ + V1423 TELETEXT V1.2 This project makes it possible to view Teletext (also know as Teletekst, Videotext, Ceefax, Skytext, Supertext etc.) on your Amiga. It is suitable for any PAL Amiga.
❑ ^ + V1430 N.D.U.K V37 (4) The Commodore Native Developer Update Kit that can be licensed for separate distribution. Includes the fd files, libraries, startups, C include files, and tools.
❑ ^ + V1436 ABANK V1.0 It is about to easily manage accounts. This software holds numerous options which are detailed in the documentation (in ASCII format and in AmigaGuide format). It's compatible from 1.2 to 3.0 systems.
❑ ^ + V1437 FOOTBALL ICONS Icons to found on this disk are: All the teams of this years WorldCup Finals plus a whole lot of losers who didn't make it including Scotland, England, Wales & Northern Ireland. Plus the entire Scottish and English Premier League plus top european leagues also plus flus drawers specifically for Rangers, Manchester Utd, Celtic and Newcaster Utd fans crammed full with icons.
❑ ^ + V1438 WB 3.0 SCREENS Enhance your workbench disks backgrounds with theses nice full colour pictures. Can be used as backdrops for your workbench
❑ ^ + V1439 DOS REFGUIDE V1.0 The first and only Amiga Dos reference Guide on the Amiga range hits the computer disk.
❑ ^ + V1440 DATAMASTER This database has many good features including a maximum of 99999 records in one database and upto 256 fields in one record. There are extensive searching facilities and printing possibilities. Very good.
❑ ^ * V1443 HCE V1.0 (2) C Compiler environment for the Amiga. By Detlef [illegible]
❑ ^ + V1462 AMIGA FAX V1.4 Is a software package that, in combination with a FaxModem, allows you to send and receive facsimile [illegible]
❑ ^ + V1467 AWARD CONSTRUCT A very handy tool for creating your very own awards and certificates. There are many styles, fonts and graphics to choose from.
❑ ^ + V1468 GAMES HD INSTALL Provides you with the software needed to install certain games onto your A1200 [illegible]
❑ ^ + V1479 NEXT GENERATION WB Powers up the Workbench [illegible]
❑ ^+ V1509 PRO-GAMBLE V1.0 is a horse racing prediction system thats easy to use and accurate in it's predictions.
❑ ^^ V1512 256 COLOUR ICONS This disk is full of lovely colourfull icons for use in WB3 only as they are 256 colour images. Draws, tools & project types.
❑ ^+ V1513 SCION V3.13 An genealogy application. It provides all you need to build up a computer database of your entire family tree and all the relating details.
❑ ^+ V1514 ABC PATTERNS For those of you who get a little bored with the old plain grey Workbench, here is a disk full of all the WB patterns and screens. Good.
❑ ^+ V1516 TERM V4.0 (2) The latest version of this very well known comms terminal program. Version 4 has even more features and although it is not for beginners it is probably the best available.
❑ ^+ V1518 APOLLO 11 (2) A very informative hypertext book all about the famous Apollo 11 mission which allowed man to set foot on the Moon. Stacks of information interspersed with photos, documents and diagrams. Very good.
❑ ^+ V1522 VIRTUAL WORLDS An adventure creator for which you need no programming knowledge to create worlds. Using an easy to use point and click interface, you can design an entire adventure without having to type in a single line of code.
❑ ^+ V1523 RELOKICK V1.41 Howdi doodlely doooo Amiga freaks! It's ANOTHER(!) version of ReloKick.
❑ ^^ V1532 RAYTRACED ALIENS HAM of a Profiles of the Alien.
❑ ^^ V1534 ICONIAN V1.97 An icon editor with all the functions of IconEdit under OS3.0, plus more. Features: Support for sizable windows and custom fonts.
❑ ^^ V1535 (AGA) JPEGAGA Highest quality JPEG viewer (if a map file for that picture is available) uses the HAM8-mode
❑ ^* V1537 MAGICCX V1.0 Tthe definite commodity/system enhancer for any Amiga running OS 2.x or better.
❑ ^* V1538 MASS ICON ALTER allows manipulation of many icons all at once.
❑ ^* V1540 TIMEGUARDIAN is a program package with which you can easily start events, that have to be done at certain times or dates on your computer.
❑ ^* V1541 VMEM V & VMM VMEM v1.0 Release 1 VIRTUAL MEMORY SYSTEM for ALL Amigas with WB2 or above. VMM v2.0 is a virtual memory manager for any Amiga with a 68030 or 68040 processor. Up to 128 MB of virtual memory
❑ ^^ V1542 (AGA) SIRD. STEREOGRAM GENR V3.8 The dots (which seem random) are calculated in such a way that if you focus behind the picture (monitor, etc), you will see a 3D pic with a real feeling of depth.
❑ ^+ V1544 MANAGECDPICS Ccataloger that allows you to create picture-databases and easily view the pictures.
❑ ^+ V1546 MN3A v1.2 An antenna design program used to calculate currents, impedance, and fields of wire antennas. The wire may contain lumped-constant loads.
❑ ^* V1548 PRO-WIZARD V2.0 is a multi-converter for Amiga music files packed with tools like NoisePacker, ProPacker, etc. It converts all these weird formats in the standard Protracker format!
❑ ^^ V1552 M.U.I v2.2 MAGIC USER INTERFACE is an object oriented system to create and maintain graphical user interfaces.
❑ ^^ V1554 I.B.M (2) THE IMAGINE BUDDY SYSTEM is an excellent new added for Imagine 2.0
❑ ^+ V1556 IMAGE STUDIO v1.1 Has been written for the casual graphics user who wishes to convert or manipulate various graphic formats on almost all amiga machines.
❑ ^* V1559 TOATERS TEXTURES Contains four Reflection Maps, Two Bump Maps, Nineteen Surfaces and much more.
❑ ^* V1560 BIG DUMMYS GUIDE TO THE INTERNET The first edition of the book By Adam Gaffin

Hottest 4

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GAME DISKS

❑ ^ + 1060 STAR TREK: TNG This is a strategy based Star Trek in which you control the Enterprice.
❑ ^ + 1081 ULT STAR TREK This is probley the most famous of the games here with great graphics and sound.
❑ ! - 1073 TETRIS ORIGINAL This is the closest game to the original tetris.
❑ ^ ^ 3040 TETRIS (AGA) If you like tetris, you need this disk.
❑ ^ + 3075 18 HOLE GOLF Fully selectable speed and power functions com-bined with superb graphics and sound. (2)
❑ ^ * 3287 ROAD TO HELL [2Mb] Is an over-head view driving game like HotRod. Theres a helping extra which can be bought from the shop like Tyres, Engines, Rockets etc.
❑ ^ + 3310 STARBASE 13 Is a graphical adv similar in style to monkey island & Operation Stealth. A brilliant game (2)
❑ ^ + 3370 DIGITIAL TETRIS Is a 1 or two player Tetris game with neat graphics
❑ ^ ^ 3436 MOTOROLA INVAIDA Its just another excellent AGA very large graphics space invaider type game. (2)
❑ ^ ^ 3454 (AGA) KLODIKE Fancy a game of Klodike with AGA graphics. (3)
❑ ^ * 3619 GNU CHESS 4.0 It contains a nice graphical user interface (menus, use mouse to move pieces ect.) The advantages of this program over that others are GNU Chess is a much stronger chess playing program.
❑ ^ + 3766 SMASHING TETRIS Another tetris variant game with excellent colourly exiciting graphics.
❑ ^ + 3803 A DAY AT THE RACES In which you can run a horse racing stable with a selection of options. Run a stable of horses.
❑ ^ ^ 3804 (AGA) MEGABALL the best Amiga bat & bat game ever. New Bats, bricks, sounds extra levels.
❑ ^ + 3814 HIGH OCTANE! Stunner of a game in the vain of HotRod! You get an overhead view of the race course.
❑ ^ ^ 3819 (AGA) TO THE DEATH Just has to be purchased because its brilliant, The Best Karate type game around. Select various characters and special moves.
❑ ^ + 3820 DOG FIGHT BiPlane but with better graphics, sounds, extra long screen sizes, split screen play.
❑ ^ ^ 3839 GEORGE GALAXO AGA platform. You control a beach barrow that machine gun and must fend off all kinds of enemies.
❑ ^ + 3841 KRILLIAN INCIDENT Take control of a federation starship & travel the known galaxies defending outposts from certain factions of the race called the Krill. similar to games such as Elite and Epic.
❑ ^ + 3844 MOOSE DRIVE Driving simulator that is shown isometrically on the screen, cars are all three dimensional. Good game in which you are only race against the ever improving computer cars but also customise your car with new parts.
❑ ^ + 3846 TANX 'N' STUFF The screen is divided into four and then each player drives his or her tank around the countryside in search for the other three tanks which must be destroyed.
❑ ^ ^ 3864 (AGA) MISSILES You must defend your city of Xenon in this futuristic nuclear war game. First purchase all the weapons and defences that you need, then you have to shoot down the waves of enemy missiles which come in all shapes and sizes. Superb graphics & sound. (2)
❑ ^ ^ 3885 IMPERATOR A strategy game for one player in which you must conquer the world. Contend with barbarians, plagues, rival empires and your own commanders.
❑ ^ + 3897 TASKFORCE Is in fact quite a complex, strategic war game in which you control a taskforce of five men.
❑ ^ + 3904 SOLAR LORDS An excellent war gaming game with loads of features like, personal rating, income per turn, credits, military power, luck rating, strategic power, science rating.
❑ ^ + 3909 TOOLBOX In this game you must move a teddy bear around his toybox in order to destroy all the bad toys by pushing toy blocks into them.
❑ ^ ^ 3914 (AGA) BEETLE Platform puzzler in which you must manoeuvre the beetle around various levels collecting all kings of fruits and other power ups.
❑ ^ + 3915 STEEL DEVILS (K) This game is played with a minimum of two players. The idea of the game is to destroy your opponents within the realms of various different levels. Different weapons can be collected as well as other power ups.
❑ ^ + 3918 STEWARDS ENQUIRY Ever played one of those horse racing games on an old 8 bit machine. Well this is just like those. Up to eight players can bet their money on horses which race before your very eyes.
❑ ^ + 3919 MINESWEEPER A classic puzzle game often found on Windows. You must uncover squares without hitting mines and try to work out the where abouts of the mines and marking them.
❑ ^ + 3920 TIMELESS EMPIRE A text adventure in which you can vertually decide the result yourself.
❑ ^ + 3936 DEEPSPACE V1.6 Is an ansi/ascii text space role playing game. Includes mega enhancements from our original Aminet release and a few bug fixes. CYCLES!! This LightCycles game allows you to design the courses in any paint package.
❑ ^ + 3938 GLADIATOR V1.0 Wargame that runs in WB window. Strategy game, You control 1 or more characters (which can be magic users or fighters) and the computer controls an opposing team.
❑ ^ + 3939 IMPERIAL V2.65 Oriental game in which you have to remove tiles from a layout (like Shanghai). Every game has a solution and there's a layout editor.
❑ ^ * 3940 DUALMAZE V1.3 Solve two mazes at the same time! Single player game using the dual playfield feature of the Amiga to provide a unique challenge. Scrolling graphics, music, and new mazes each time you play!.
❑ ^ ^ 3942 PLANET FALL AGA Great (and hard) Lunar Lander game. 2 levels of a great lunar lander type game, with nice sounds and fun action.
❑ ^ + 3944 MOONROCKS Recent news reports indicate a famous dead rock star has been sighted on the moon. Your mission, if you choose to accept it, is to find the rock star and land near him.
❑ ^ * 3945 SPHERES OF INFLUENCE Is a strategy game of galactic colonization (for one to eight players one of which must be human.) Hard drive installable. 1 Mb of CHIP
❑ ^+ 3946 MIND GAMES 4 Jim's VideoPoker v1.0, Lazymines v1.0, Mastermind v1.6, MineSweeper, Montana v1.2, NineMen v1.6, SCS v1.0, Washer, Ying&Yang.
❑ ^ + 3947 FOOTBALL MANAGER This is probably the best Football Manager game currently on the market. By Datasoft
❑ ^ + 3948 SENSITIVE Your stuck on a board simular to a chess board but with squares missing. You have to Move around the board after passing over a square it will dissapear!. You have to end on the end square to complete the level.
❑ ^ + 3949 INDUSTRIAL ESPIONAGE Is a game for 1-4 players who each take on the role of a spy attempting to steal secrets from a company. Along the way you must search rooms, plant bombs, shoot guards / other spies and access computer terminals in order to complete your mission.
❑ ^ + 3950 SPLOGGY An excellent platform game in the style of Super Mario World. Brilliant recommened for all its nice colourful graphics and playability.
❑ ^+ 3952 (AGA) KLONDIKE EXTRA CARDS 3-7 (5) Contain Extra card sets for use with Klondike.
❑ ^^ 3958 (AGA) TETRIS DUEL This tetris clone is for those of you with AGA machines only. The graphics are very good and so is the gameplay. There are a few extra features such as bombs and other things that drop down instead of the normal blocks.
❑ ^ + 3964 SUPERLEAGUE 3 This is a utility for compiling and storing football results. It allows you to build up a league and/or cup database easily and then allows easy access to all the information.
❑ ^ ^ 3968 ERIC SCHWARTZ MORPHY THE MAGIC MAN AGA This AGA version has even better graphics but needs twice the memory. (4Mb)
❑ ^ + 3969 OVERLANDER Moonbuggy. You take control of a moonbuggy and must navigate the planets surface whilst shooting both ground and air targets.
❑ ^ ^ 3971 (AGA) BACMAN This game is an AGA pacman clone which uses the full 2 meg of your machine. Not very exiting, quite good graphics.
❑ ^ ^ 3972 ZOMBIE APOCALYPSE 2 This is the sequal and it is better. With improved graphics and sound effects this game is even more gorey than it's origanal. The gameplay is operation wolf style and is full of blood.
❑ ^ + 3973 KNIGHTS A very good new adventure type arcade game for two players. You are each a knight who is patrolling the dungeons. There are many items to collect and if you see each other you can have a fight. Excellent graphics and gameplay.
❑ ^+ 3974 BUCK TOOTH BOB'S JUNGLE ADVENTURE This is a quite amusing platform shoot'em up. The idea is to blow as many birds and other jungle animals apart as possible with Bob' trusty double barrelled shot gun!
❑ ^ + 3975 AUTOMOBILES A cute little racing game which is a bit like skidmarks but on a very small scale. The game can be played with up to three players at once. Good graphics and loads of options like new tracks and different control methods. Great.
❑ ^ + 3976 PEEBEE A very cutey little shoot'em up in which you are a bee. The game scrolls up screen through garden like levels in which you can shoot just about anything. Good graphics.
❑ ^ + 3977 Q-BIC This is a very good clone of the game QBert. You need to colour all the squares of a pyramid in this puzzle game.
❑ ^ + 3978 SPACE TAXI You must thrust your space taxi through space collecting passengers from various platforms and then dropping them off again at other platforms. The catch is that you have to control your undercarriage. Very addictive.
❑ ^+ 4000 TRICK OR TREAT A game that is played by two only. The gameplay is rather like Doom on the PC but the idea is to knock on doors where you will get a trick or treat. The treat will help you to seek and destroy the other player.
❑ ^+ 4006 SCHNEBITZ This is a cartoon style puzzle game in which you must guide Schnebitz through each puzzle by moving certain coloured blocks into their correct positions.
❑ ^+ 4007 STARWOIDS (2) This is a very well presented arcade game. The game is meant to be like Star Wars. There are lots of well drawn logos, menus and even a short intro which give this game a professional feel. The actual gameplay itself is not quite as exiting but still very addictive. You have to thrust around in your X Wing collecting troops on the ground.
❑ ^^ 4010 (AGA) KLONDIKE CARDS 08 [STAR TREK] A set of Star Trek playing cards for Klondike (or Klondike 2). Good.
❑ ^+ 4056 ARCHY'S MINIDASH This is old C-64 style Boulderdash clone, AdvancedMiniDash, and here is many new great features, like bombs, magic walls, arrows, etc. full editor, what allows to use all features.
❑ ^+ 4066 MORIA v1.2.0 is a single player dungeon simulation. choose from a number of races and classes when creating a character, then 'run' that character over a period of days, weeks, even months, attempting to win the game by defeating the Balrog which lurks in the deeper levels.
❑ ^+ 4067 DYNAMITEWAR V2.0 A tiny game for 2-5 players who fight against each other. It is similar to the commercial DynaBlaster or Bomberman, except a 1-player mode is not available. On the other hand, there are a great number of extras. To win the game, one player has to disintegrate all other players by exploding bombs. Author Andre Wiethoff
❑ ^+ 4068 ICE PRINCESS V1.4 Role-Playing Game which is a Demo version of an interactive novel. You are an 18 year old orphan who meets the love of his life on Christmas Eve. A fairy-tale story for both young and grown-up children.
❑ ^+ 4070 ROACHFARM V1.0 Congratulations on your new job as head shipping clerk in the roach division at Insect Fun Inc. Your job is to fill test tubes with live roaches in preparation for shipping so that eager Roach Farm customers may stock their farms with livestock. Author Lucas Swineford.
❑ ^+ 4071 CITADEL SPACE EMPIRE In Space Empire, you compete with up to 25 other players attempting to control the universe and become the glorious Space Lord. The route is difficult and there are many enemies along the way, an economic and strategy game.
❑ ^+ 4072 3D DUNGEON TEXT (V5.0) This demo enables you to walk through a 3D dungeon. All walls are realtime texturemapped and shaded. The ECS version uses 64 colors. The AGA version uses 256 colors. Author John Hendriks.
❑ ^+ 4076 ANTWARS V1.9 Puts you in the shoes of an ANT who must try and destroy the anemys ant nest. Tactical.
❑ ^+ 4084 ULT. FRUIT MACHINE Althought the graphics are simple the gameplay is highly addictive and realistic. Good Game.
❑ ^+ 4085 DEPTH CHARGE is based on an old arcade game in which you control an subarine destroyer. Destroy subs.
❑ ^ + AS159 DRIVING MANIACS Best racing game ever seen on PD with solid 3d graphics including Scenery, Track and car details.
❑ ^^ 4089 SOME JUSTICE AGA
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Prelude to a print

As printers continue to reach new highs in quality at lower prices, Adam Phillips reviews some of the latest

A printer is the first step most Amiga users take when they realise that their machine is more than just a games machine – word-processing, spreadsheeting, graphics creating and more are available at the opening of a wallet. While for most homes the average 9-pin dot matrix will suffice for personal documents, people who want real quality with a professional air need to spread their wings and money a little more to achieve the right look.

What follows is an examination of the more expensive printers that are available for the Amiga. Starting from the 24-pin dot matrix and steadily working up to the heady heights of premier laser printing, there's a model in here for everyone.

All the printers were tried and tested on an A1200 using either PageStream or Wordworth with 4Mb of extra RAM to aid graphics importing.

Citizen ABC





Currently the bestseller at several retailers round the country, the Citizen ABC colour would appear to offer excellent value for money at such a low price. Costing £139, the 24-pin dot matrix with an installable colour ribbon is indeed a reasonable machine for the beginner.

Getting the printer up and running requires the insertion of the ribbon and motor which, thanks to the largely easy-to-understand instructions, fit snugly into their respectable positions. Placing the paper for the first time in the sheet feeder can be a fiddly experience but, as with most computer hardware, practice eventually makes perfect.

The ABC is Epson and IBM compatible meaning that, for the likes of Wordworth, you'll find the right driver sitting waiting to be plucked off the WW Print Manager disk or alternatively, use the ABC driver provided as part of the purchase.

Once up and running, the machine is easy to use and efficient, apart from the very occasional refusal by the printer to recognise that it is actually plugged into the computer. The print quality is what you would expect from a low-priced unit – sufficient, but text is rough round the edges at times and only really suitable for home use.

Graphics wise, the colour is adequate but the old problem of 'banding' instead of an even spreading of colour is present, severely so in some cases, so don't expect too much. The picture shown took 35 minutes to print and the supposed quiet option drove the people in the office up the wall for that half-hour as it screeched its way through the job in hand.

The tone of this review may sound harsh for such an inexpensive piece of kit which does, for the money, print. It's a 'fun' machine that can knock out sheets relatively quickly for simple documents and as a tool for users to knock out personal documents, this will do adequately.

The bottom line

Product: Citizen ABC Colour Printer
Price: £139
Printhead: Ribbon – Colour: £15.63, B&W: £4.20
Supplier: Silica Systems
Tel: 081-309 1111

Ease of use	**8**
Implementation	**6**
Value for money	**8**
Overall	**7**

Panasonic 2135



Hot on the heels of the Citizen ABC and costing more, but with extras galore thrown into the consumer grabbing mix, the Panasonic 2135 bundle has been released by Indi Direct. Two versions of the same machine are available to buy – the first offers the 2135 coupled with the Wordworth word processing package, a mouse 'house' and a mat.

The second option features the printer, a 2pc printer stand, 500 A4 sheets of paper and a cable that usually has to be bought separately. Both these packs cost £184.99 and offer solid value for money. But, if the machine itself is a lame duck, it really doesn't matter what is included as 'free.' So, is the Panasonic 2135 up to the harsh and testing environment of an *Amiga Computing* workout?



The first thing to grab you as the printer is pulled from the box is the more traditional, robust look and feel of it. Admittedly, it's still plastic but it actually feels solid instead of rather flimsy. Getting the machine operational is far less fiddly than the Citizen ABC and is simple to operate via Wordworth.

Printing quality is of a reasonable standard – in fact, on the several test sheets I ran through, there was little difference between it and the ABC. Like the Citizen, it tended to bleed large lumps of colour together, producing an unusable print for any professional work. Text is again adequate but nothing special, with definition being varied from letter to letter. Smudging between larger letters is also apparent, even after the head gap has been moved into its optimum position.

Whether the printer is worth buying over the cheaper Citizen is down to whether you have a word processing pack to run it from and therefore need the rather useful combined package on offer.

The Panasonic P2135 is not a bad machine but don't expect anything too special. Like the Citizen ABC, it's main forté is producing letters and documents for home use only and with its Wordworth pack, makes an ideal machine for the beginner.

The bottom line

Product: Panasonic P2135
Price: £184.99
Printhead: Ribbon – Colour: £12.99, B&W: £6.99
Supplier: Indi Direct Mail
Tel: 0543 419999

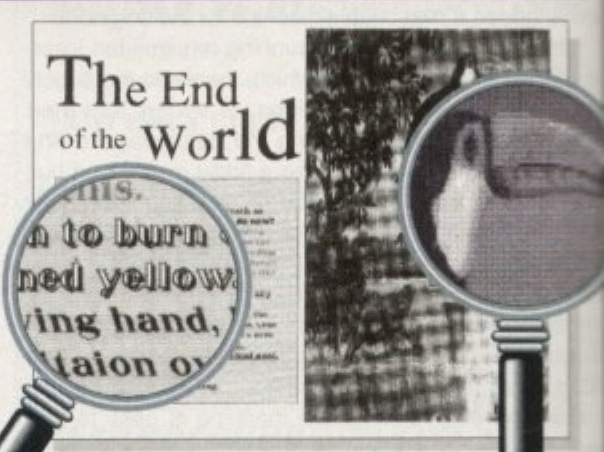
Ease of use 8
Implementation 7
Value for money 8
Overall 8

Epson Stylus 400

Inkjets have become the main purchase of most serious users. The ease of use and quality output you get without splashing out on a laser are enticing features on most inkjet machines. Like EPL 3000, the Stylus 400 has been released at a similar price point to the Hewlett Packard 500 series with the obvious intention of stealing some of the American company's thunder.

Coming in a plastic casing, this machine isn't a bad looker. Boasting 360dpi, the Stylus 400, while not having an Amiga-specific driver at the moment, can double up and use a variety of others such as the Epson 800, 300 and LQ versions. Quality is very reasonable indeed with generally solid definition. Printing of larger text sizes though can lead to ink density problems and a slight fading usually appears at the bottom of large letters. While this is annoying, it's not too detrimental to the final image.

One point that must be remembered with the inkjet-based systems is the type of paper used. Thin, photocopying paper simply isn't good enough – the ink tends to bleed into the paper making it look like some ropy 9-pin dot matrix print out. Therefore, quality paper with a suitable thickness and a shiny sheen is recommended for best results. Printing graphics is also effective, providing clear pictures with sharp definition. Unfortunately, banding is present but, like the text fading, is not too distracting. Time wise, the 400 took a little over a minute to be prepped by the computer and knocked out the image you see here in three minutes.





The Stylus 400 is a solid, quiet machine that offers an affordable alternative to dot matrix printers but doesn't quite match the Hewlett Packard 520 mono in terms of quality.

The bottom line

Product: Epson Stylus 400
Price: £225
Printhead: Ink cartridge – £10.30
Supplier: Epson
Tel: 0442 303681

Ease of use 8
Implementation 7
Value for money 8
Overall 8

Star SJ-144

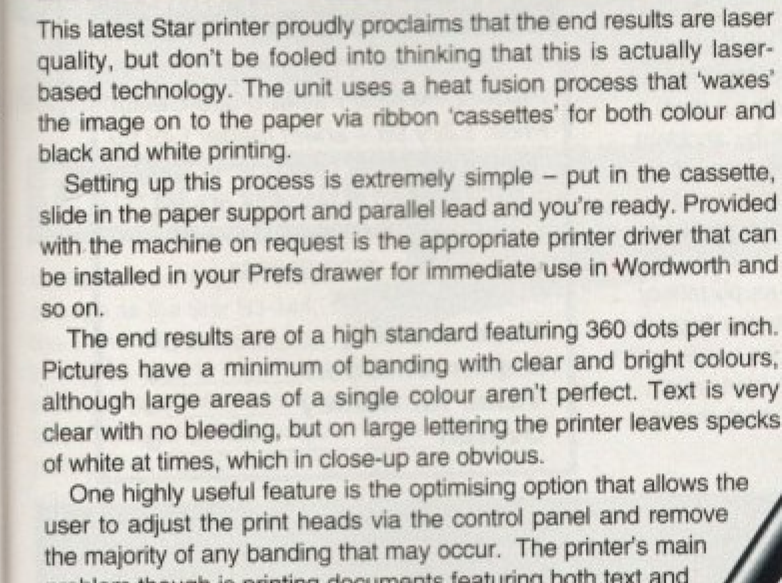


This latest Star printer proudly proclaims that the end results are laser quality, but don't be fooled into thinking that this is actually laser-based technology. The unit uses a heat fusion process that 'waxes' the image on to the paper via ribbon 'cassettes' for both colour and black and white printing.

Setting up this process is extremely simple – put in the cassette, slide in the paper support and parallel lead and you're ready. Provided with the machine on request is the appropriate printer driver that can be installed in your Prefs drawer for immediate use in Wordworth and so on.

The end results are of a high standard featuring 360 dots per inch. Pictures have a minimum of banding with clear and bright colours, although large areas of a single colour aren't perfect. Text is very clear with no bleeding, but on large lettering the printer leaves specks of white at times, which in close-up are obvious.

One highly useful feature is the optimising option that allows the user to adjust the print heads via the control panel and remove the majority of any banding that may occur. The printer's main problem though is printing documents featuring both text and graphics – this is not a fast machine. Unlike the 560C that works at a constant speed, the Star stops, starts and has to rotate the ribbon to the correct colour before continuing on its way. If you can live with the lack of speed then the SJ-144 is a highly likeable and efficient printer that, as an alternative to laser printing which requires a good deal more money for a colour option, is excellent value for money and costs less than the 560C. Recommended.



The bottom line

Product: Star SJ-144
Price: £369.99
Printhead: Ribbon cassette – Colour: £6, B&W: £5
Supplier: Ladbroke Computing
Tel: 0772 203166

Ease of use	9
Implementation	9
Value for money	8
Overall	9

The small print

Before you grab the phone and start ordering your dream print machine, it's always best to consider the most important aspect of any purchase – the after-sale service. While a printer may appear excellent value for money, it is always essential to check out the costs and warranties of a particular product.

How much does a new toner cost? Will your inkjet require a new print head or a less expensive refill of your existing one? Does the company you're buying from offer on-site repairs or a loan machine while yours is being fixed? The answer to these questions can affect your buying decision and make you pay just that little extra for an assured future for your printer.

Citizen Projet IIC





Recently released by those gents at Citizen, the Projet IIc is the latest entry into the more serious-end user market. Compact and bijoux, the machine is a sleek piece of kit with three simple buttons to operate the printing process. Included in the package are two print heads – black and white and colour.

Also tucked away snugly in the box is a set of blank paper and transparencies to start the user off, and an extremely helpful container for keeping print heads stored while not in use. Small touches such as these add a real touch of professionalism and appreciated thought to the overall package.

The Projet is one of the least fiddly of the printers reviewed here to set up. Clear instructions and its emulation of the very common Hewlett Packard 500C printer makes it a very easy machine to operate for even the absolute beginner.

Performance-wise, this isn't at all bad. While the definition of lettering is by no means perfect, with a slight roughness round the edging of larger lettering, the Projet's ink density is flat and even unlike the 400. The colour is good with the minimum banding associated with many inkjets, and the overall end result is eye-catching.

There are some misgivings about the machine though – asking it to print a grey background for a text box while the colour print head is installed results in a purple hue instead of grey and lettering that isn't jet black. If you just want a black and white print out, this won't be a problem but if a combination of black white and colour is needed, choose your palette carefully. Less obtrusive problems include the oh-so-slightly irritating back paper tray that has to be reached by manoeuvring the paper past the two wires protruding from the back.

Also, the paper feeder is rather swift, so care must be taken with the front cover to ensure that it is fully closed or the paper will be damaged as it exits the machine. This restriction, induced by the front cover, also means that it is difficult to check the printer as it initially begins printing without the paper becoming crumpled as it leaves via the wrong slot.

The final criticism is the paper provided with the printer. While it is a much appreciated inclusion, the paper is by no means the most ideal to print on – bleeding and rather dramatic banding is apparent and not impressive.

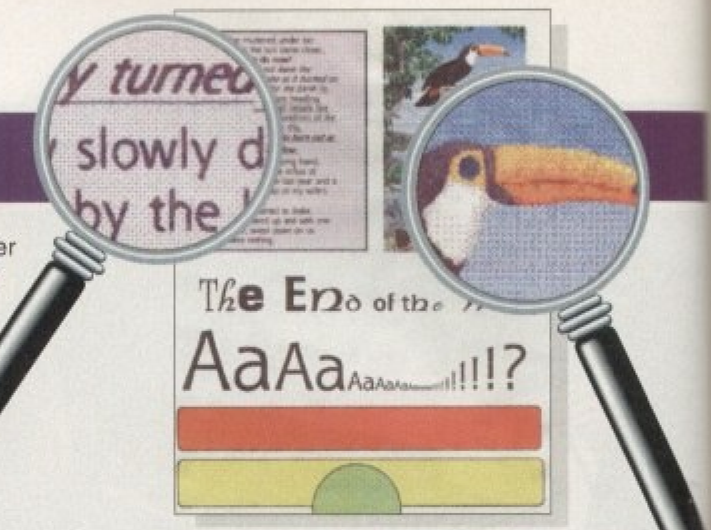
Grumbles aside, the Projet IIc is a good all-round machine with a healthy price tag. For those who want colour which is presentable and text printing that is effective for menus, listings and the like, the Projet is a worthwhile investment.

The bottom line

Product: Citizen Projet IIC
Price: £254.99
Printhead: Ink cartridge – Colour: £24, B&W: £5.69 (refillable)
Supplier: First Computer Centre
Tel: 0532 319444

Ease of use	8
Implementation	8
Value for money	9
Overall	8

Hewlett Packard 320



Hewlett Packard has a reputation in this business. Its deskjets have already made a substantial splash and with its move into providing portables that can be carried round with laptop machines, the 320 is the latest addition to the ranks. This machine is the printer-equivalent of a kit car – the 320 comes in the shape of a basic stand that includes a paper feeder and another separate unit that contains the printing mechanism.

Once assembled, which is surprisingly simple to do, the user has a full-blown desktop printer. Using just the printing hardware without the paper feeder turns it into a highly portable unit that can be taken anywhere with the aid of an included battery pack that lasts for up to 100 sheets.



Quality, while not as good as the Projet for clarity and density, is of a professional-enough standard for presentation use. Also, colour is more accurate than the Projet but, as can be seen in the examples, has a purple hue to grey areas. Bleeding of text is apparent in places though not as bad as the 560C and, on larger text, banding is clearly visible on each letter. .

Another criticism is the lack of loop holders on the parallel lead that plugs into the printer. Without them it could be all to easy to yank the lead out by accident during printing. Incidentally, for some reason the printer always begins printing in draft mode and requires a hurried and well timed stab at the draft button to turn it off. Again, annoying but not terminally awful.

Despite these minor problems, as far as portability goes the 320 is the ideal choice and beats the likes of the Projet hands down. The quality could be better but for those always on the move who need a light weight, sensibly-sized printer at their constant disposal, the HP 320 fits the bill perfectly well.

The bottom line

Product: Hewlett Packard 320 Colour
Price: £229.95 + sheet feeder £49.99
Printhead: Inkjet cartridge – Colour: £25.50+VAT, B&W: £17.50+VAT
Supplier: Computer World
Tel: 0532 350091

Ease of use 8
Implementation 8
Value for money 8
Overall 8

Hewlett Packard 560C

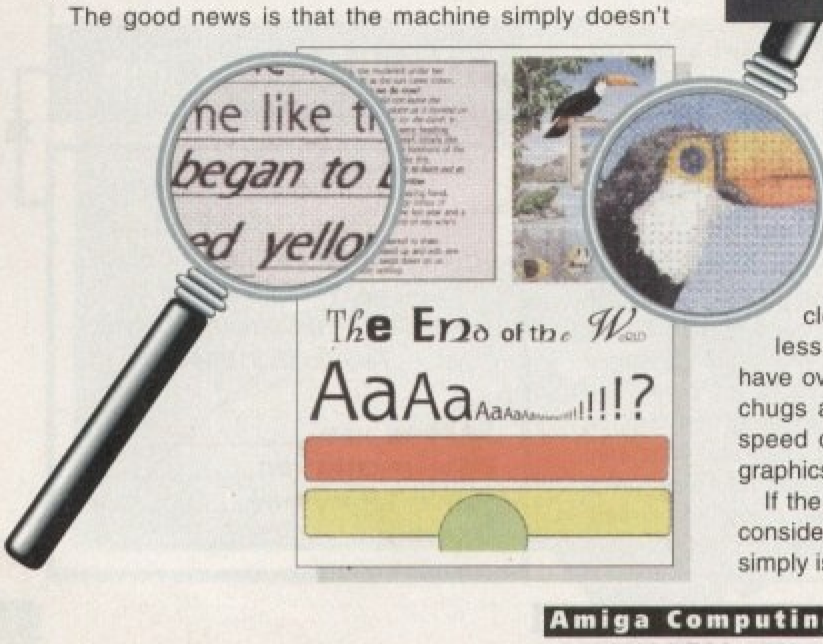


Don't be put off by the picture. The Hewlett Packard's 500 series may look as plushly designed as a council flat but the robust and solid printer, like anything, should not be judged by its looks. Underneath that breeze-block veneer, that takes up most of the space on any desktop, is the heart of one of the most popular set of printers ever made.

The 560C is the peak of the 500 range, with an inkjet-based system that features a rather handy twin cradle. This allows both the colour and black and white print heads to be fitted at the same time, assuring jet black when using colour.

Also included is a host of useful facilities such as the auto-clean button, alignment checking to make sure that both print heads are running parallel with each other and an ecomode to save on ink. But what about the quality? Well, for the price that HP are asking I'm not that impressed, especially when compared with the likes of the Star SJ-144 and the Citizen Projet that each cost less.

The good news is that the machine simply doesn't suffer from banding problems. The bad news is that the density of ink is not always a hundred percent and the old inkjet signature is apparent – the ink bleeds. When placing a black line as a border round a block of colour, the black bleeds rather badly into the colour – as you can see in the printout



I also found that the picture printing is not as clear as the Star SJ-144 and the colours are less vibrant. The one thing that the 560C does have over its competitors is its speed. While the Star chugs along, the HP printer works at a reasonable speed on documents that incorporate both text and graphics.

If the 560C was cheaper it would be a printer worth considering but at the moment, for what it does, this simply isn't worth it.

The bottom line

Product: Hewlett Packard 560 Colour
Price: £424.99
Printhead: Ink Cartridge – Colour: £25.50+VAT, B&W: £23.50+VAT
Supplier: Computer World
Tel: 0532 350091

Ease of use 8
Implementation 7
Value for money 6
Overall 7

A word of warning

Whenever you're considering buying a printer, remember that the hardware is only part of the equation. No matter what you spend, without the appropriate print driver your brand new printer may as well be a brick. The printer driver is the vital computer software that communicates to the printer and tells it what to do.

Unfortunately, many manufacturers don't provide Amiga-specific drivers. In fact, one retailer, while advertising an Amiga-specific model, didn't even have the driver to operate it at its optimum performance.

While many printers offer alternatives to use in case their specific one is not available, there's a chance that some of the particular features offered by the model will not be used because the driver simply doesn't accommodate for them.

When ordering, always make sure that the retailer can provide you with the necessary software. If not, then try PD libraries, CIX and CompuServe which are all excellent places to begin hunting for the right driver for your machine.

Finally, don't forget that paper and the essential parallel lead that connects the computer to the printer are normally left out of the retail price. Make sure you find out the overall price, taking the above into consideration.

Canon BJC-4000



While not looking quite as strange as the Star SJ-144, the Canon, in terms of performance, nearly matches it pixel for pixel when printing. Based around bubble jet technology, the BJC-4000 is a user-friendly machine that requires the minimum of fuss when setting up. Canon has very kindly provided the appropriate drivers on a disk for running the printer in Wordworth and PageStream.

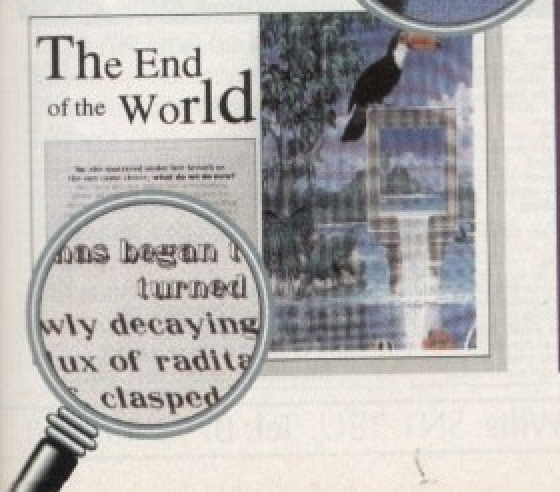
Alas, whether it be due to the driver, program, printer, or myself, trying to print using Wordworth didn't work. Despite this and with fixed determination, the BJC was only too happy to strut its stuff in PageStream, producing some rather impressive results. With 360 dpi bulging healthily underneath this printer's slight appearance, the machine works at a reasonable speed – two pages a minute on basic documents including colour.

The first thing to strike you when viewing a colour picture is the complete lack of banding or bleeding. The next thing that's noticed is the slight blurring of the image and the lack of vivid colour as if the image is a touch out of focus. Despite this, the results are sufficient enough to get a prominent thumbs up.

The only banding that did appear were the lines running through large areas of grey, but these are still relatively subtle and don't leap out from the page.

As far as text is concerned, smaller font sizes are solid enough for letter writing while larger lettering has an edge of roughness to the ink density which, fortunately, is not immediately noticeable.

There is a problem though, not to do with the printer itself but rather the price attached to it. Weighing in at a hefty £419.99, the Canon BJC-4000 is a touch on the expensive side and, while better than its nearest rival, the Hewlett Packard 560C, is shamed a little by the Star SJ-144 that costs roughly £50 less. Nonetheless, with a price drop, the BJC has the potential to be an excellent buy with its all impressive lack of banding and bleeding.



The bottom line

Product: Canon BJC-4000
Price: £419.99
Printhead: Bubble jet cartridge – Colour: £17.62, B&W Hi-Speed with higher dpi: £30.55, B&W: £8.23
Supplier: First Computer Centre
Tel: 0532 319444

Ease of use	**9**
Implementation	**8**
Value for money	**7**
Overall	**8**

Epson EPL-3000



For quite some time now, Hewlett Packard has held a vice-like grip on the inkjet and laser printer market. A majority of its annual profits come from its printing products and, up until now, has seemed in an unshakeable and enviable position.

With the arrival of Epson's two low-priced models – the Stylus 400 and EPL 3000 – the company from Japan has pushed forward two new contenders into the HP-dominated scene. Priced at £400, the EPL 3000, despite having some shortcomings, is excellent value for money.

Unpacking this superior unit will initially register a little disappointment – the whole thing looks rather plasticky. In certain areas the printer is flimsily built. For example, the paper feed tray lid is loosely fitted and easily pops out of its slots. The 'lip' that folds out at the top to stop the exiting paper from falling out is also a problem area and one wonders how long these features will last under the vigours of constant use.

Getting past these initial misgivings, the EPL 3000's real class reveals itself when the first print rolls out of the printer for inspection. Its 300 dpi, coupled with Epson's Resolution Improvement Technology (RITech), an alternative to PostScript that smoothes jagged edges of printed lines or shapes, gives quality of a very high standard.

While only being black and white, 24-bit colour images were suitably greyscaled to produce impressive and useful results. Text is of a high standard and equally, larger lettering is crisp and clear with a very minimum of roughness on curved letters.

Four pages a minute is the average time for the calculation period, increasing with the complexity of the document. Anyone seriously considering using the EPL 3000 as a quick-heeled image maker for design must consider upgrading the machine's 1Mb of RAM to a maximum of 5Mb via the expansion slots.

With its quiet operation, configurable control panel and clear, concise instructions, the Epson EPL 3000 is a very tempting buy. Despite the rather flimsy design and the strange 'jammed cover' quirk that insists that there is something wrong with the lid when it hasn't been touched, this entry-level machine for laser quality finished products is a worthwhile and thoroughly recommended buy if you can live without colour.

The bottom line

Product: Epson EPL 3000
Price: £399
Printhead: Imaging Cartridge £89 (lasts up to 4,500 pages)
Supplier: Epson
Tel: 0442 61144

Ease of use	**8**
Implementation	**9**
Value for money	**9**
Overall	**9**



Novice to pro

Adam Phillips checks out two new resources to help beginners become experts of the field

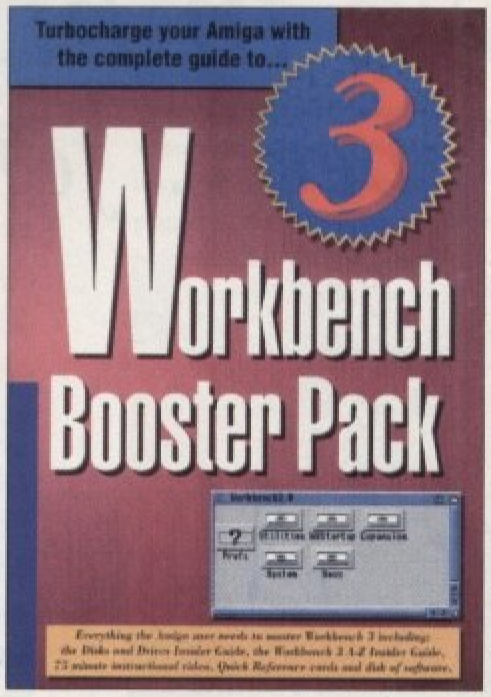
Workbench 3 Booster Pack

After the highly successful Amiga 1200 Beginners Pack was released several months ago to critical and commercial acclaim, Bruce Smith Books has unleashed another compilation package to aid users in their understanding of Commodore's beast. Aimed at 1200, 2000, 3000 and 4000 Amigas, the Booster details the functions of Workbench 3 and how to get the most from them.

Included in the fair-sized box are two books, Amiga Workbench A-Z and Amiga Disks and Drives, a 75-minute video, a disk with shareware utilities and two reference cards. The two books form the main backbone of the pack – the A-Z is a highly useful and concise guide to WB 3, with each function given a description and then a usage breakdown with hints and tips.

The second book, Disks and Drives, details the use and care of hard and floppy drives. Providing a full breakdown on how different saving systems work, the guide also details a host of other facilities such as copying and moving files, disk repair and minimising the risk of potential disk drive problems.

Included is a supplementary floppy that lets you try out some of the examples given in the book. Some handy shareware utilities have also been included such as encrypt routines and a search facility that hunts out sound, picture and other files.



Get stuck in to the more intricate side of Workbench

Finally, the video gives a generous breakdown of some of the many WB 3 features – Postscript printing, document transfer to MSDOS and directory structures. Like most of Bruce Smith Books' releases, the Amiga Workbench 3 Booster Pack is a comprehensive and useful tome and is a fitting continuation of the Insider Guide series.

While not suited for the absolute beginner, those of you with a vague working knowledge of WB 3 and who are seriously interested in getting the most out of your Commodore machine, should consider this as an insightful Christmas purchase. Recommended.

The bottom line

Product: Workbench 3 Booster Pack
Price: £39.95
Supplier: Bruce Smith Books, PO Box 382, St Albans AL2 3JD
Tel: 0923 894355

Verdict - A good value buy for beginners through to semi-techie types

The Amiga Guru Book

Let's make no mistake, this is no beginner's book. Anyone wandering through a book shop with a brand, spanking new A1200 clutched under one arm and eyes focused on a guide for newcomers will be better off giving this epic tome the cold shoulder until they've learnt a serious amount about their machine.

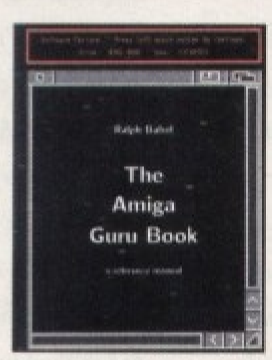
Don't get me wrong – this is one very helpful and incisive piece of work that covers a startling array of subjects in its 700 plus pages. The purpose of the original Guru book was to fill in the voids left by the 1.3 manual for Workbench. Now, three years on, the "sequel" has arrived to try and clear up all the inconsistencies and inadequacies spread by, not only manuals, but also magazines and other books. (Not ours of course though!)

Part reference manual and part tutorial, the Amiga Guru Book has been produced for advanced programmers that, despite their experience, have some burning questions and queries about certain peculiarities found in Amiga hard- and software. Presented in a series of examples, ready-to-use listings and tables, the book goes into great detail about a vast variety of topics – information about data types supported by the processor, the operating system, guidelines for proper multitasking programming, an introduction to the ins and outs of C and assembly-language programming are just some of the facilities given the analytical treatment.

For those who want to learn everything about AmigaDOS, error codes, handlers and packets, the Global Vector and a library of other explanations await the patient and astute reader.

Also included for helpful reference is a comprehensive glossary and bibliography for Amiga "students" to continue their learning. The above only skims the surface of the amount of information packed into this manual.

Computer books such as this are intimidating to flick through, each page unveiling another hefty chunk of listings and assorted technical goodies and are a far cry from the Insider Guide Series.



The techie book to end all techie books

If, though, you want a manual-cum-tutorial guide that takes time to absorb and above all, lets you practice your programming skills and infinitely increase your understanding of the Amiga, then the Amiga Guru Book is not to be missed. For the price though, only serious users need apply.

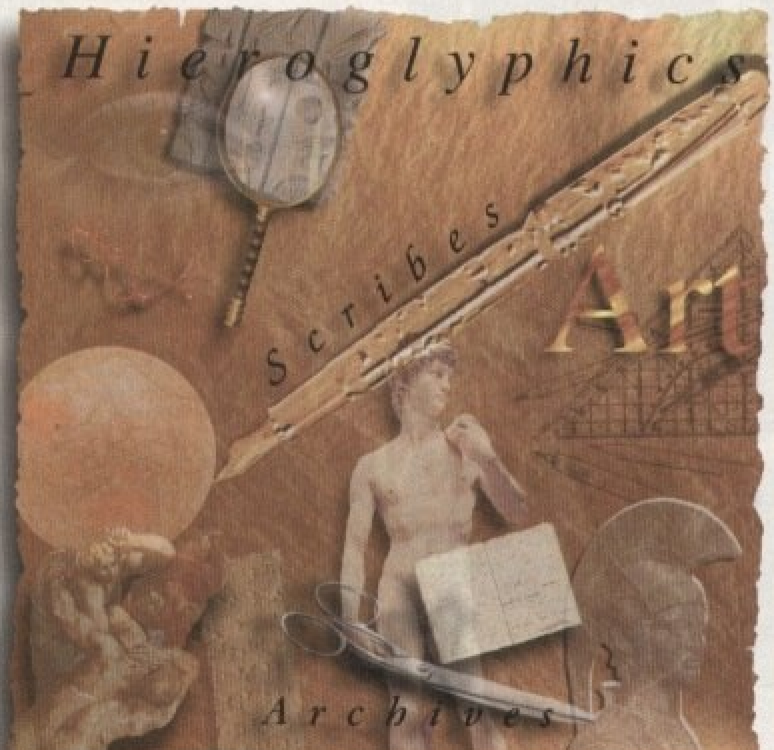
The bottom line

Product: The Amiga Guru Guide
Price: £35 incl. P&P
Supplier: Almathera, Southerton House, Boundary Business Court. 92-94 Church Road, Mitcham CR4 3TD
Tel: 081-687 0040

Verdict - A hefty and comprehensive tome, this is ideal for serious users

SoftWood Software *will go down in history, the best there's been... for ages.*

The way we all communicate today has evolved through centuries of development and change. Prehistoric man set the ball rolling when he used cave pictures as a means of describing his hunting conquests. Probably the most famous of all 'picture writing' techniques was that used by the Egyptians. Known as Hieroglyphics, which means 'sacred carved inscription', this ancient form of information technology quickly spread to all parts of the Mediterranean region. Gradually pictures were rationalised and both numbers and letters were eventually formed.



The Greeks were the first to use these letters in a way that is familiar to us all, and they in turn passed this knowledge on to the Romans. It was then that an alphabet was formed using only capital letters; the basis of most of today's languages. Inscriptions in stone, often filled with lead or bronze, eventually gave way to clay tablets, papyrus and ultimately parchment (treated animal skins). By AD 100 parchment and papyrus books were being created. Another 600 years passed before books began using capitals for headings and small letters, known as 'half unicals', for the main body of text. Although still made by hand, pages were easier to produce and became far more legible in the process. It was the mid 15th century before sets of small interchangeable metal letters were arranged, inked and pressed against paper to form an impression. The start of a printing process that was a less labour intensive way of spreading the written word was here. It was so successful, that with continual refinements, it remained the industry standard until the 1950's. Since then, the process of off-set litho printing has replaced 'hot metal type'.

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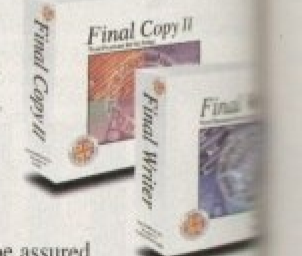
And it doesn't stop there. Archiving and record keeping works hand in hand with these new methods of processing text and allows far faster methods of data retrieval than ever before. This latest technology has revolutionised the world of print, and has opened the door to an explosion of communication possibilities.

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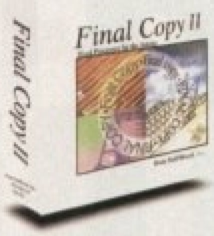
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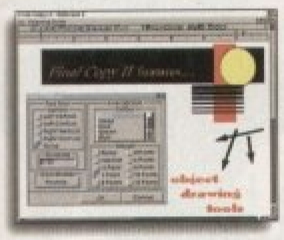
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Release 2



Designed to get the most out of an Amiga twin floppy drive system, ***Final Copy II***™ offers more than just word processing (at which it naturally excels) and opens up a world where 'how the document looks' is as important as 'what the document says'. ***Final Copy II***™ is ideal for that quick letter but also has powerful features that produce end results that you'd normally associated with Desk Top Publishing packages - easy to achieve, without the fuss!

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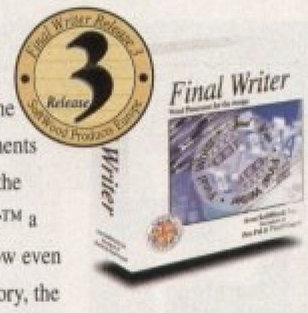


both landscape & portrait modes) ensure that ***Final Copy II***™ is the leader in its class. You can easily create multiple newspaper style snaking columns, import any graphics objects or pictures (and place them anywhere on your page), scale or crop those graphics and also auto flow text around them. You can even print text over graphics and the output is always of the highest quality. ***Final Copy II***™ offers the perfect balance between word processing and more advanced page layout generation - in one great program. Ease and speed of use combined with total control of the final printed presentation is available on your floppy based Amiga system right now for only ***£49.95*** *inc. p&p.*

Final Copy II™ requires an Amiga system with twin floppy disk drives or a hard disk drive and a minimum of 1Mb. free RAM (A600 hard drive - 1.5Mb). Flexible and practical from floppies; no installation or multiple disk swaps required.

Final Writer™

Release 3

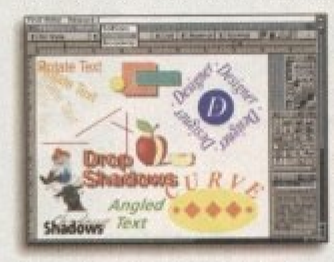


This newly upgraded release of ***Final Writer***™ is building on the success of *Release 2*. Improvements and innovations, along with all the features that made ***Final Writer***™ a winner, mean that the best is now even better still. Hard drive compulsory, the program is aimed at the power user offering the ultimate in performance. Just like *Final Copy II*™ you can take advantage of the excellent output associated with **PerfectPrint**™, but added to that is a host of other advanced features too...

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change and save such attributes as font size, text position, bold, italic, underline, justification, bullets, line spacing, indents etc. One magazine stated "this is the closest thing to Microsoft Word to appear on the Amiga".

Final Writer™ can import, scale, crop, view on screen and output structured PostScript EPS clip-art images to any printer, and we even include 100 quality images for your use. And, if you use a PostScript printer, ***Final Writer***™ extends your options... thumbnails, scaling, crop marks and halftoning. Add floating palettes, ArRexx/Macros, undo/redo (for both text formatting **and** graphics), table of contents, auto indexing, table of illustrations, bibliography generation and lots more for real power. ***Release 3*** takes your Amiga even further with new drag & drop text, spell while you type, dictionary hyphenation, foreign language dictionaries, auto save, polygon graphics and irregular shape generation.

Amiga word publishing power for only ***£74.95*** *inc. p&p.*

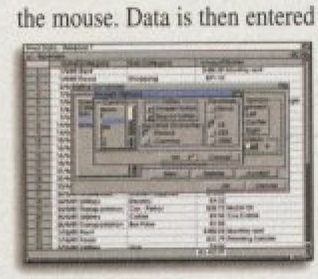
Final Writer™ Rel 3 requires an Amiga running Workbench 2 or 3 with a hard disk drive and a minimum of 2Mb. free RAM.

Final Data™

New Release



Final Data™ has been designed to be by far the EASIEST TO USE Database for your Amiga. Many users dislike the involved "two stage" process conventional databases force you to follow. To set up a ***Final Data***™ database, you simply define a column for each type of information you want to keep eg. first name, last name, address, town, county, postcode and phone number etc. Incidentally, you can add or remove columns at any time. Your new database will appear as a table with rows and columns allowing you to view lots of data at the same time. Column widths can be adjusted by simply dragging their borders with the mouse. Data is then entered into "cells" and ***Final***

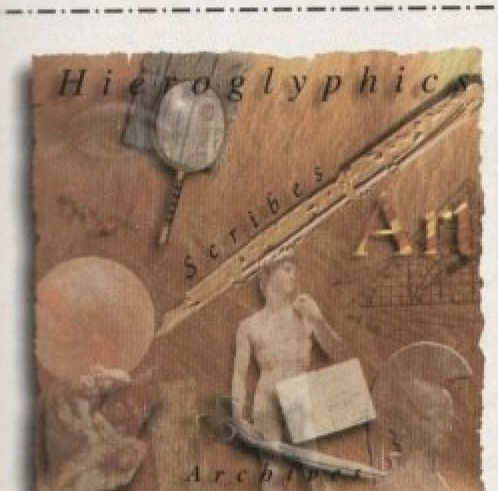


Data™ even detects entries of invalid dates etc. and displays an alert message. Screen totals are available as options on all amounts and calculations (numbers can also be formatted with currency signs and commas). ***Final Data***™ is ideal for label printing and has built-in routines that remove all the complexities from this task. You can even utilise the "Print Merge" feature found in *Final Copy II*™ and *Final Writer*™ - simply select the program you are using and ***Final Data***™ does the rest. It can also read any database created in *Pen Pal*™, MiAmiga File and *File IIsg*™ as well as ASCII files found in other many other programs.

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Casualties





Whether you're wordprocessing all day or playing games into the early hours, it's time you gave your computer habits a check-up. Gareth Lofthouse reports

When you think of dangerous jobs you may include working on an oil-rig or being involved in the fire service or construction industry. The last thing that most people would consider to be dangerous is working on a computer.

Though this may seem like the most innocuous of tasks, there *are* serious health risks. Industrial job hazards may be more life-threatening, but computer-related risks affect a far wider range of the population, whether they're tapping away at work or at home.

As computers have become increasingly popular both in the household and in the workplace, complaints about upper limb disorders, back and neck pain, headaches and eye strain have increased dramatically.

Even if you are only using the computer for a hobby, you could be vulnerable to some of these problems. Enthusiasts tend to clock up a lot of hours using poor seating and slapdash equipment arrangements, while not taking the breaks they would be entitled to at work.

The good news, however, is that all of these problems are preventable. Furthermore, sensible ergonomics doesn't necessarily mean great expense – more often it's just a matter of a little time and thought.

Repetitive Strain Injury

RSI is a disorder involving pain, muscular weakness and occasionally tissue swelling. It results from repeating the same movements again and again without allowing the body any time to recover, and it most frequently affects the wrists and arms.

Diagnosis is tricky, but this does not mean RSI can be taken lightly because the condition often leaves the afflicted needing weeks or months to recover, and can even cause permanent damage.

Prevention is therefore vital. US statistics suggest that these ailments rank first among job-related injuries and compensation claims, showing that RSI can cost a lot for the employer as well as the employee.

To avoid keyboard associated problems, users should not bend their wrists too far up, down or sideways. Pressing keys does not usually cause hand stress, but uninterrupted rapid keying in awkward positions is dangerous.

If you find it hard to maintain a good typing posture, a wrist mat may help you to keep your hands at the right level. These are very cheap and widely available.

of computing

VDUs and pregnant women

This is a contentious issue. In the past, reports have suggested a link between miscarriages and VDUs in computer workers, with concern being focused on the radiation emitted by monitors.

The official line is that pregnant women are not at risk but the fact that research has been inconclusive has left some doubt . Anyone wishing to err on the side of caution could consider changing to a monitor that meets MPRII requirements. This Swedish standard sets the most stringent requirements on monitor radiation emissions, and many manufacturers are now making models that meet MPRII. An alternative explanation for the increase in miscarriages in this area could be poor workstation design, overwhelming workloads or stress.

Aches and pains

Backache is not a permanent problem but it is very common. It may surprise you to know that sitting for a prolongued amount of time exerts a far greater pressure on the back than standing or walking.

If you have the right sort of chair, your thighs should be roughly parallel to the ground and your feet flat on the floor or a footrest. Low seating pressures the thighs, but if it's too high it pressures the back of the knees.

Good adjustability is one of the keys to ergonomic equipment. and of course the importance of regular breaks

Eye strain

It is unlikely that using a VDU will cause permanent vision problems, but many users do complain of sore eyes after using computer screens. One reason is that concentrating on the screen reduces blinking which can lead to dry eyes.

This problem can be alleviated simply by blinking more frequently and by briefly refocusing away from the screen now and again. Improvements in lighting, the quality of the VDU and the use of a screenglare filter may also be helpful.

LASA: 071-377 2748.
Produces a factsheet on health and safety for computer users costing £3. Clear general advice and very good on your legal rights in work.

HMSO Publications Centre:
PO Box 276, London, SW8 5DT.
Publisher of titles providing official guidance from Health and Safety Executive.

British Epilepsy Association:
Freephone 0800 309030

Know your rights

If you are a computer user in the workplace then you are protected by the law. The Health & Safety (Display Screen Equipment) Regulations 1992 require employers to reduce workstation risks.

They also set minimum requirements for workstations and make periodic breaks and access to training a right for users. Other regulations set out duties for employers in relation to health and safety in general. HMSO bookshops hold a number of titles covering computers and health, each one costing £5.

The Amiga Computing checklist

1. Check the desktop is at the right height and that you have sufficient leg room. Make sure it's large enough to arrange equipment and documents for comfort.
2. Arrange the workstation around your body, ensuring all things can be reached without too much strectching.
3. Put the keyboard near the edge of the table and tilt forward slightly to avoid awkward wrist positions.
4. Avoid neck pain by getting the monitor at a suitable height. A VDU with a swivel base is preferable.
5. Adjust screen controls to suit and minimise screenglare. Don't put up with flickering displays.
6. Be careful about your sitting posture. Get a stable chair that supports your back and is fully adjustable to suit your body.
7. Take regular short breaks. This allows for muscle stretching and mental stimulation, which is not only good for your health but also your productivity.
8. Use equipment like wrist rests and screenglare shields if you find it helpful, but remember, adjustability and breaks are more important than expensive equipment.
9. Check that there is sufficient general lighting and a desktop light source.
10. When glancing from document to screen a lot, use a document holder as this will help to prevent awkward twisting of the neck.

Epilepsy and computer games

Thanks to sensational reporting in the tabloids, this is an issue surrounded by many misconceptions. Given that parents don't know if their child is epileptic until they have a seizure, it's not surprising if they're worried about them playing video games.

Epilepsy is a condition where the sufferer has a tendency to have recurrent fits and it can take many forms. Only photosensitive epileptics are vulnerable to fits triggered by flickering light, and since they represent only 15,000 of the 400,000 UK sufferers this problem does not affect the majority of epileptics.

According to Sue Cooper, PR Officer for the British Epilepsy Association, epilepsy is very rarely potentially fatal. A story in The Sun three years ago suggesting that a video game induced a fatal epileptic fit has not been authenticated.

ATTACKS

People need to know that they have epilepsy, and since they will only find out by having a fit, suffering an attack at home in front of the computer screen is preferable to having an attack when driving, for example.

If parents discover that their child has photosensitive epilepsy they can take certain precautions. Banning playing the consoles will not be a popular option with the kids, so there are alternative preventitive measures which will allow the relevent epilepsy sufferers to play video games safely.

A child should sit three to four feet away from the screen in a well lit room. Then, if they cover one eye with a patch the risk of a seizure will be reduced to virtually nil, since it appears that both eyes must receive the flickering light to trigger a fit.

It seems that singling video games out as a health risk in this area has been unfair. It may help to put things into perspective to know that television is the most common trigger of photosensitive epileptic fits.

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U273 FREE COPY 1.8 Similar to Lock Pick 2.
U293 BBASE 3 Powerful database.
U219 EDWORD PRO 4 Excellent word processor.
U021 MENU MASTER 3 Excellent util. to make menus. Easy to use.
U295 DOC DUMP Compress text to print.
U294 PARBENCH Link up 2 Amigas to control/communicate.
U231 VIEWTEK 2 (WB2+) Great multi-viewer supports IFF, GIF, JPEG etc.
U241 PPSHOW 4 Excellent multiviewer (can view compressed files).
U313 UNDELETE Get back deleted files!
U296 MUSICBASE Excellent database. Edits include tracktime, running time, artist etc.
U297 SOCCER LEAGUE Footy database. Lots of statistics can be entered.
U298 THE ANIMATION CONSTRUCTION KIT
U299 ADVENTURE GAME CREATOR
U257 DISK SALVAGE 2 Fixes corrupt data.
U300 NCOMM 3 Latest version of very popular comms package.
U301 AMIGA FOR Great desktop publishing package.
U27 GRAPH PRO Create/draw graphs.
U302 NUMPAD Gives A600 a number pad.
U001 ULTIMATE ICON MAKER
U303 HARD DISK STACKER (WB2+) Increases up to 50% HD Space!
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U066 M-CAD Computer Aid Design.
U304 MINIMORPH
U305 DART MACHINE Scorer.
U308 AZ SPELL Huge spell checker.
U105 CROSSWORD DESIGNER
U077 A-GENE Family tree.
U306 GUITAR TUNE
U315 BUSINESS CARD MAKER
U309 GRINGER Excellent gfx viewer.
U314 BON APPETIT Recipe database.
U163 WINEMAKER Great database!
U268 AMIBASE PRO 2 Excellent database package.
U280 TSMORPH 3 Latest morphing programs.
U221 LABEL MAKER
U244 ENVELOPE PRINTER
U307 X PASSWORD Protects disks.
U040 GHOST WRITER Put messages on back of disks easily.
U310 FAST INTRO MAKER (WB2+) Fantastic intro maker.
U057 DOPE INTRO MAKER Similar to the two above.
U110 203 UTILITIES Very varied!

GAMES

G157 ORK ATTACK Drop rocks on Orks. Quite fun.
G147 EXTERNAL ROME. Great strategy game.
G024 LARN Excellent text adventure.
G167 CASH FRUIT Blummin' good fruit machine game.
G137 COIN DROP Great fruit machine.
G080 MEGABALL 2.1 A classic bat and ball (Arkanoid) game.
C148-9 HIGH OCTANE (2) Good overhead racing.
G124 DRAGON TILES Stunningly good, remove the tiles (Shanghai) game.
G170 CAPT. BONUS Good rip off of Prince of Persia.
G158 LOADSAMONEY Excellent fruit machine.
G161 MOIRA 5.4 Huge role playing game!
G159 QUIZ MASTER
G169 SUPER PACMAN The best version!
G010 WIZZY'S QUEST
G160 KLAWS THE CAT Very nice looking platformer.
G162 TOP OF THE LEAGUE Great footy management game.
G163 TOADA Very addictive frogger clone.
G164 WORLD DARTS CHAMPION Brilliant!
G166 DRIVING MANIACS Astounding 3D racing game!
G131 STRIKE Excellent 10-pin bowling game!
G165 DELUXE GALAGA
G151 HYPERDRIVE Great 1 or 2 players futuristic racing game.
G156 TETRIS PRO Possibly the best TETRIS clone.
G168 CUBULUS Maddening addictive puzzler.
G178 TRAILBLAZER Exact replica of the CBM64 classic!
G180 SCORCHED TANKS One of the best 1 on 1 blasters.
G152-3 STARBASE 13 (2) One of the best PDs around. Like Monkey Island (point 'n' click).
G181-2 18 HOLE GOLF (2) Great Golf game.
G130 G. PRIX MANAGER
G183 KUNG FU CHARLIE
G101 SCRABBLE
G018-9 STAR TREK (2)
G184 E-TYPE Great asteroidsy game.
G177 FLEUCH Thrust clone.
G145 PROKER Brill poker game.
G185 MONACO Excellent racing game.
G186 V-CHESS
G173 REVERSI 2 The best version.
G042 LCD GAMES 4 handheld games converted.
G187 POM POM GUNNER Op. Wolf style blaster.
G188 WAYNE'S WORLD PONG Lovely sound effects!
G189 WIBBLE...GIDDY Commercial quality!
G155 POPEYE Conversion of the CBM64 classic.
G129 CRICKET Simple but fun cricket game.
G144 DYNAMITE WARS 4 player clone of DYNABLASTAR! Excellent!
G128 DONKEY KONG Classic CBM64 conversion.
G059 HOLY GRAIL A classic text adventure game.
G190 BLACK DAWN Excellent D&D game. Highly rated in mags.
G191 AVATRIS 3 Player Tetris!
G192 BOX Text adventure from author of Life and Death.
G171 AZTEC CHALLENGE Excellent CBM64 conversion of one of my fares!
G193-4 TALISMAN (2) Huge icon driven adventure - 2Mb.
G125 CRAZY SUE 2 Excellent platforming game.
G195 RAID 4 Excellent! Like SWIV.
G035 WET BEAVER Tennis.
G009 CAVE RUNNER+ The best Boulder-dash clone!
G172 SUPER TWINTRIS One of the best 2 player Tetris games!
G109 SUPER SKODA CHALLENGE Overhead 4 player racing!
G078 LLAMATRON One of the best blasters! By Jeff Minter.
G106 EXTREME VIOLENCE Fun 2 player hunt and shoot.
G110 MEGASQUAD One of the best 1 on 1 blasters!
G150 METRO Train set game.
G079 DR. MARIO The classic clone of Tetris, with a twist.
G174 ACT OF WAR 1.4 Excellent strategy/shoot game. Like Laser Squad.
G175 C-ROBOTS Program robots to fight each other.
G075 DOWNHILL CHALLENGE Great skiing challenge.
G023 TOMTESPELLET Nice Speedball clone - not 1200.
G196 MONOPOLY
G143 DOODY
G197 ZULATORS! V. funny text adventure.
G037 JETMAN It's a Jetpac clone.
G123 SON OF BLAGGER Conversion of CBM64's classic platformer (identical).
G198-9 MR MEN OLYMPICS (2) An amazing sports game. Great for the kids.
G179 BOMB JACKY Good Bomb Jack type game.
G176 LEMMINGS 2 HD INSTALLER
G108 ROAD TO HELL Excellent overhead (1/2 players) racing game - 2Mb.
G203 NOSTALGIUM The CBM64's Uridium!

DEMOS

D231 FAIRLIGHT 242
D232 SANITY ARTE Fantastic demo!
D233-4 NINE FINGERS (2) Follow up to State of the Art!
D235 LEMONS GROOVY
D236 EXPLICIT 2
D237 WORLD OF COMMODORE
D194-9 PINK FLOYD: THE WALL (6) A total classic! - 2 Drives, not A1200.
D174 RAY OF HOPE 2 Georgeous graphics - not A600/A1200.
D238 VOYAGE
D049 BUDBRAIN 2 - not A600/A1200.
D239 FULL MOON Best demo of the year so far?
D240 EMPTY HEAD
D241-2 ORIGIN (2)
D243 PLANET GROOVE
D244 FRACTAL EXPERIENCE
D245-6 MAX. OVERDRIVE
D247 POINT OF SALE
D248 RETINA

A1200 ONLY UTILS

U316 SLEEPLESS NIGHTS Good collection of utils.
U317 FREAKS Another good collection.
U318 PC TASK V2.03 PC emulator.
U260 A1200 ICONS
U237 AGA 1 Good collection of utils.
U238 AGA 3 Another collection.
U278 LYAPUNOVIA Excellent fractal generator.
U319 WINDBLEND Great fractal generator.
U320 ANDY'S WB3.0 UTILS Good collection.
U240 AKTION REPLAY PRO The disk manipulator(?) on floppy.
U321 MAGIC WB (Also on WB 2.0).
U323 MANDELMANIA Mandel's man.

EDUCATION

E016 WORLD GEOGRAPHY
E017 THE ATOM - 1.5Mb + 2 drives.
U229 LITTLE TRAVELLER
E018 STEAM ENGINE
E019 PETROL ENGINE
E015 LEARN SIGN LANGUAGE
E010 TYPING TUTOR
E020 BIORYTHMS
E021 HOW EARTH BEGAN
E022 SINGALONG NURSERY RHYMES
E023 CHILDREN'S SONGS
E024-6 ELECTRONIC WORLD (3) New and Old Testament.
E027 AMERICAN FOOTBALL
E028 HIGHWAY CODE TUTOR
E012 JAPANESE LANGUAGE TUTOR
E029 BACK TO SCHOOL 1 Three fun and simple learning progs.
E030 BACK TO SCHOOL 2 For the kids to learn from.
E031 OCTAMED TUTOR Learn how to use it properly.
E032 ASTRO 22 v 3.5S For the discerning astrologer.
E033-4 READ and LEARN 1 (2).

A1200 ONLY GAMES

9139 MEGABALL AGA The best version of the bat and ballers.
9142-3 MOTOROLA INVADERS (2) Excellent blaster.
G118-20 KLONDIKE (3) Georgeous gfx of Patience the card game.
G144 MAD FIGHTER Excellent streetfighter 2 clone.
G085 AGA TETRIS Inevitable really.
G145 GIGER TETRIS Alienesque gfx on this!
G084 BORON Great blaster.
G141 AIRPORT This fantastic game fixed to run on the A1200.
G126 UCHESS Excellent chess game (also WB20) - 4Mb.

A1200 ONLY SLIDESHOWS

S083 MAGIC FACTORY 2 Excellent sci-fi pix.
S079-82 WORLD OF MANGA (4) Amazing quality.
S084 FERRARI
S085-6 MINI AGA (2)
S087 NIGHTBREED
S088 NIGHTBREED 2

GLAMOUR

B001-2 BODYSHOP 4 AGA (2)
B003-4 BODYSHOP 5 AGA (2)
B005-6 FIT CHIX 3 AGA (2)
B007-8 FIT CHIX 5 AGA (2)
B009 CINDY CRAWFORD
B010 CINDY CRAWFORD 2
B012-3 BODYTALK (2)
B014 MADONNA
B015-6 ERIKA ELENIAK (2)
B017-8 FAMOUS REVEALED 1 (2)

SPECIAL PACKS

These special packs are priced with postage included!
These packs do not include the FREE gifts unless ordering with 10+ disks.

COMMS

NCOMM2, LHA + DMS, BBC SIMULATOR, PHONE DIRECTORY, TEXT + 3.0, AMIGA FAX, COMMS BEGINNERS GUIDE
5 DISKS = £4.25

BUSINESS PACK 1

TEXT ENGINE 4.1, AMIBASE PRO 2, EASYCALC(+) (state machine), AZ SPELL, TYPING TUTOR, PRINT + BUSINESS CARD MAKER, DIR UTIL.
8 DISKS = £6.75

BUSINESS PACK 2

FORMS UNLIMITED, INVOICE PRINTER, 600 BUSINESS LETTERS, LABEL PRINT, FILOFAX, TEXT + 3, HOUSE INVENTORY, AMIGA FOX DTP
8 DISKS = £6.75
★ BUY BOTH BUSINESS PACKS (16 DISKS) = £12.95

SPECTRUM PACK

SPECTRUM EMULATOR V2 + APPROX. 85 CLASSIC GAMES...
Underwurlde, Spy Hunter, Green Beret, Jet Set Willy, Saboteur, etc.
7 DISKS = £6.25
★ BUY FULL SET, APPROX. 188+ GAMES (14 DISKS) = £11.50
★ A1200 owners ask for AGA Emulator

STARTER PACK

DUST COVER (A500/A600/A1200), MOUSE MAT, DISK HEAD CLEANER, 10 BLANK DISKS, 10 DISK BOX HOLDER, 5PD OR YOUR CHOICE ALL FOR £16.50.

F1 LICENCEWARE

Prices from £3.99 to £6.99
We are official F1 Licenceware distributors. Below are 18 exclusive F1 titles which can be ordered from us. A full listing of ALL F1 Licenceware products are in our catalogue. All titles work on A500(+)/A600/1200 unless otherwise stated.
Please remember to add 75p for P&P.

F1007 FORTRESS **2Mb Chip+ Only £3.99**
Rated 88% A. POWER (Jun 94).
Rated 90% THE ONE (Jun 94).
This is a war Arcade/strategy game based on the likes of MEGALOMANIA and POPULOUS, with excellent GFX, sound FX and an addiction level that will keep you glued to the monitor for simply yonks!
"...Absolute marvel to behold", said A. Action (May '94).
"...Graphics are gorgeous...I loved it!," said The One (June '94).

F1006 BLACKBOARD v2.0 (2 disks) £4.99
Earlier version rated 88% CU Amiga. New version rate 90% Amiga Shopper.
"AGA owners get near 24-bit graphic manipulation...should be on your shelf if you are into graphics," said Amiga Shopper. BlackBoard is an image processor written specifically for the AGA chip-set machines, although BlackBoard will run on any Amiga with the following system. REQUIREMENTS: 2 floppy drives (or hard drive) and a minimum 1 meg of memory.

F1001 MAGNUM PRO £3.99
Earlier version received 93% CU Amiga (Oct '93)
This is the final version of the acclaimed disk magazine creator with loads of NEW features. Amos source included to create your own interface!

F1002 Cricket Crazy £3.99
Reviewed in A. Power (Apr. '94) "Nearly as good as the commercial Cricket sims! Just about every aspect of cricket covered."
Cricket Crazy is the most advanced cricket simulation yet, combining arcade action and strategy in a mix of fun and friction that even non-cricket fans will enjoy. Humoungous amount of features!

F1003 Absolute Beginners' Guide to Amos (v2.1) £3.99
A.B.G.T.A. has been written with the complete novice in mind and introduces all the early commands every beginner needs to overcome. Loads of example progs ready to run (need Amos)... set up to print for Epson prints for easy printing of articles.

F1004 Super Fun £3.99
Super Fun contains four education programs for children in the range of 5-9 years. Great solve the sums games, make your own records using 750 different sounds, junior version of Mastermind with numbers and a prog which allows you to see any time-table from 1-99.

F1009 The Rainy Day Disk £3.99
The Rainy Day Disk is an excellent compilation of 5 children's educational programs. The recommended age range is for 4 to 8 year olds.
Paint Box allows children to easily colour in one of ten pictures.Tiny Tunes has 10 popular nursery rhymes in a copy and play environment. Wordsearch - find the hidden words in each of ten different puzzles. Story Book - make your own pictures in this mini-art program.

F1010 Karate Master
"REQUIRES AT LEAST 1.5 MEG" £3.99
Karate Master has all the speed and variety of moves and excitement of the real sport. 1 or 2 players, 99 levels, timer on/off option, sub game every two levels + other features.
Reviewed in A. Action (Apr. '94) - "You should be impressed"
Reviewed in The One (May '94) - Rated 80%
Reviewed in A. Power (June '94) - Rated 4 out of 5 (80%)

F1012 Obliteratives £3.99
Obliteratives is an arcade skill game for 1 or 2 players. Create your own IFF screens to use as the play area!

F1013 THROUGH THE RED DOOR £3.99
Reviewed in CU AMIGA (May '94) - "Another great educational pack".
1 - Choose colour of objects in the playroom, countryside & seaside.
2 - Help Sarah find missing animals in the shop, garden and bedroom.
3 - Help to dress Sarah and Simon in the correct clothing.
4 - Find the objects beginning with the selected letter.

F1014 TOTS TIME £3.99
This one is mainly for the very young child up to four years old, has three programs.
1 - Press any key in alphabet views pictures relating to that letter.
2 - Click on a number to reveal a picture pertaining to that number.
3 - Click on a picture to hear a sound relating to it.

F1018 RELICS OF DELDRONEYE (4 DISKS) £6.99 **2Mb Chip only**
Reviewed in The One (Jun. '94) "Good a value as any of the big boy games" (Full price games), "Top stuff, buy it!" Rated 91%.
A mouse driven interactive adventure with great graphics, sound fx and animations. Contains brain numbing but logical puzzles, 64 colour gfx and around 100 locations. Like Monkey Island/Lure of Temptress.

F1019 Touch 'n Go £3.99
Reviewed in The One (Jun. '94) "As far as puzzle games go, this has everything you could want...features an excellent number of levels and layouts." Rated 87%
This is an excellent arcade/puzzle game which supports passwords, 100 levels, parallax scrolling and wicked backdrops, cool music and sound FX. Demo version appeared on The One cover disk June '94.

F1022 ASK ME ANOTHER £3.99
This disk gives tremendous value for money, it contains 20 individual learning modules that are both fun and cover a wide range of different learning techniques. This is intended for children aged 3 upwards. The modules are: Shapes, Time, Words, Adding, Colours, Homes, Money, Sequences, Matching + 11 others.

F1023 PICK AND STICK £3.99
This one is for children of up to six years old. Pick and Stick is a very simple, but fun, picture creator. The child can choose from 3 different settings: SEASIDE, FAMILY or UNDERWATER. The child then has around fifty different objects to PICK and STICK on the background picture to create their own scenes.

F1024 MATHS MONKEY £3.99
One of the best educational packs we have. This one is for approx. 7 to 12 year olds. Learning modules are:
1 - 32 clock/time questions of 4 different types.
2 - 24 questions covering addition, multiplication, subtraction and division.
3 - Different maps teaching the child to read coordinates, the child interacts with a ruler, measuring objects on a screen.
4 - How much is? Type in the value of...etc.
5 - An excellent way of graphically teaching fractions.

F1025 ART SCHOOL V1.1 (2 DISKS) £4.99
Don't be misled into thinking this is a kid's program, it is, but EVERYONE will love this awesome art package that is just bristling with original and innovative features. It can do everything you would expect from a commercial art package and plenty more besides! Buy this product now before the author realises he could be selling it at 30 quid a time. There are far too many features!

F1026 Take a Look at Europe £3.99
This is aimed at eleven year olds and upwards. The 6 modules are:
1 - Type in the name of each country (in Europe) the jet plane lands on.
2 - You are presented with a map of a country and its name, you must match this to one of the 24 capitals given.
3 - Name the ocean the whale is currently swimming in.
4 - Enter the name of the country whose flag is shown.
5 - Match the 25 currencies to the correct (map shown) country.
6 - Gives information on each European country in the form of: area, capital, currency, population and language.

Magnetic memories

An extra floppy drive can make life a lot more convenient and it doesn't have to cost a lot of money. Gareth Lofthouse weighs up the options

As a storage medium, the floppy disk can't compare with the hard drive when it comes to memory space. Despite this, they remain a vital part of any computer package, thanks to a portability which allows information to be easily transferred from machine to machine.

When the Amiga's in-built hard drive becomes full, buying an external HD might be the ideal solution, but unfortunately not everyone has hundreds of pounds to spare. Many of us are left either deleting files or running software off floppys.

It's at times like this that the idea of getting an extra floppy drive begins to make more sense. They can reduce the need for irritating disk swapping, yet they cost a fraction of the price of an HD – in fact they're arguably the most useful Amiga add-on you can get for your money.

Thankfully, the buyer can't go far wrong with the more popular floppy drives available – they're all reliable mechanisms. Apart from helping you to find an aesthetically pleasing product, however, this round up should give an idea of the extra features available, together with tips on making the most of your floppys.

PC880E

Price: 39.95
Supplier: Power Computing
Tel: 0234 273000

Power's 'Economy Drive' may lead on to dreadful puns, but that doesn't alter the fact that it's an extremely low price for a perfectly capable product.

By a slight margin it's the bulkiest of the drives on review, but unless your desk space is particularly limited then this is no real problem. Encased in cream-coloured plastic instead of the usual metal, it still seems tough enough to take the odd accidental knock.



In fact it's one of the more individual looking drives with a ribbed exterior and the Power design embossed on its top. A reliable ejector button and an LED light that shows when the drive is working help to give the unit an air of quality that comes as a pleasant surprise, given the price. While it doesn't have a few of the features you get with other packages, it's not on the most basic level either. An isolation switch allows you to enable or disable the unit and there's an in-built device to remove that annoying 'empty disk' click.

There's also a port to allow drives to be daisy chained together. Be warned, however, that most manufacturers including Power recommend that no more than two drives should be run off the Amiga's power source.

When you consider that at this price you're getting a quality peripheral for not a lot more than you might pay for a game, this package represents economy without compromise.



Xl External Drive

Price: £59.95
Supplier: Power Computing
Tel: 0234 273000

A relatively new option for Amiga users, this drive allows you to store an impressive 1.76Mb on a high density disk, double the amount that a low-capacity disk can contain.

The XL is tri-lingual allowing it to read not only Amiga but also PC and Atari formats. This is made possible using the CrossDos supplied with all Amigas with Workbench 2.1 or above.

Before the drive will work properly, a small software patch must be installed on to your hard drive from the disk supplied with the package. However, once this is done you should have no further problems in using the XL to read either low or high density disks.

Even if you don't have a hard drive, this isn't too much of a problem because you can install the patch on your boot disk.

The XL is now supplied in a new metal casing, giving it a long slim appearance. As a consequence it appears less bulky, although in fact it will take up as much of your desk space as any of the other drives.

Increased disk capacity has obvious advantages in terms of econony and compact storage, and since it costs little more than a normal drive it's well worth considering.

Also look out for the Super XL drive, the only unit for the Amiga that can store an amazing 3.5Mb on one disk. Power aims to have this out sometime in December priced at £99.95.

PC880B

Price: £49.95
Supplier: Power Computing
Tel: 0234 273000



Big, strong and sturdy is the image that this classic drive projects. It's certainly no superwaif of floppy drive design, with the emphasis clearly on the functional rather than the aesthetic.

For most people this won't matter one bit, because noone else in the round up includes so much as part of one package. The drive itself has anti-click and anti-virus facilities, an isolation switch, a cyclone-compatible chip and a throughport – all comfortingly supported by a two-year guarentee.

In addition you get Blitz Turbo, a handy little disk copying program. Put the source disk with write protection on into the internal disk, then put the other disk (write enabled) into the external drive, and Blitz will make you a bit-by-bit copy.

Not only is it Blitz compatible, it also contains in-built hardware allowing it to use X-Pro Cyclone software (not supplied). This removes the need for the little connection dongle that must usually be employed with X-Pro and makes for a tidier set up, plus you can get the software from Power for just £10.

If that isn't enough, they've also thrown a floppy disk expander into the bargain, saving you a tenner on a program that will allow you to compress your files by up to 50 per cent. This is the drive package that represents the best value for money in my view, albeit that most of its rivals are competitively priced. Tough in construction, reliable and silent in operation, this one's strongly recommended.

Speedy safe drivers

Each drive's speed was tested using a system information utility and, as was expected, there was not a lot to choose between them. The average disk speed for all drives was about 22k per second.

However, none of them were completely consistent, and some would drop down to as low as 16k/sec when reading a disk for no apparent reason. Having said this, it's not really a buying consideration because no drive was immune to the problem – and you probably wouldn't notice the slightly longer access time anyway.

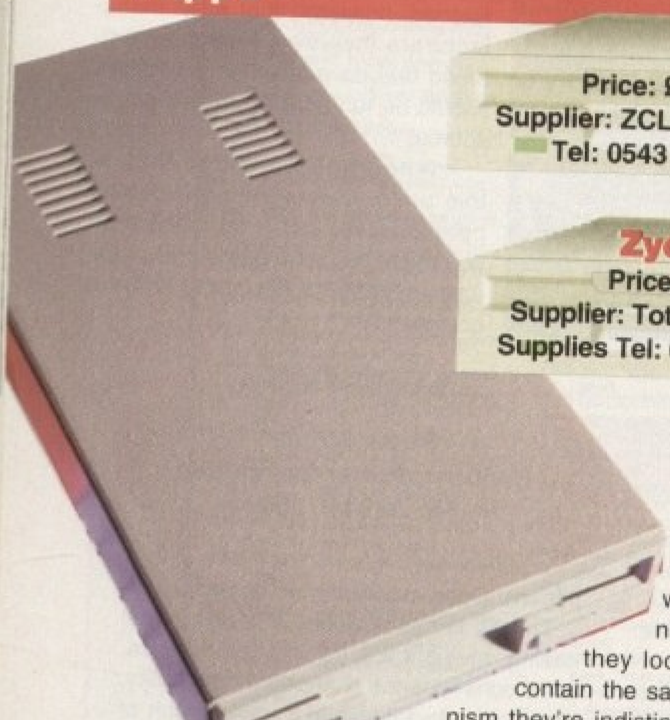
On the other hand, protecting your system against viruses is a more important issue when it comes to floppy drives. Modern units sometimes have anti-virus circuitry.

Selecting this option on the drive will mean that the unit blocks any attempts to write from the bootblock of any disk. Since most viruses work by bootblock corruption this is an effective aid in the fight against them.

Zappo

Price: £48.99
Supplier: ZCL (Indi Direct)
Tel: 0543 419 999

Zydek
Price: £54
Supplier: Total Computer Supplies Tel: 01442 233393



Two drives here with twodifferent names, but since they look the same and contain the same Sony mechanism they're indistinguishable to me. Oh, pardon me, the rubber feet are slightly different.

On the catwalk of floppy fashion, this one's another eye-catcher thanks to the racy effect given by the distinctive air vents. Ostensibly these are there to keep the drives cool, though I've not had overheating problems with drives during the feature.

Still, while the vents create an unnecessary hazard as far as coffee spillage goes, they do make the drives look flashier than its more humble rivals.

Like all modern drives, it's silent in operation and has the enable/ disable switch and a port for daisy chaining. Encased in metal and more compact than most, it's another quality drive, this time with a 12-month warranty.

Cumana

Price: £56.99
Supplier: First Computers
Tel: 0532 319444



This odd-looking unit has been around for as long as anyone round here can remember, yet after all this time it's still popular and widely available, despite its peculiar appearance.

The Cumana is encased in tough beige plastic and sports bulges at its side that make it the widest of the drives. I would hardly say it looked beautiful, but at least it stands out among the crowd of oblong boxes.

As far as features are concerned, there's a port for chaining drives together, an enable/disable switch and – well, that's about it. Still, these switches are more important than they may seem; your Amiga allocates memory to peripherals at the expense of your programs, so you don't want your drive making claims on RAM all the time.

Among the other drives which operate so silently, you initially wonder if they're working. The Cumana is a noisy piece of machinery. Every time you access a floppy it clicks repeatedly, making for an irritating distraction.

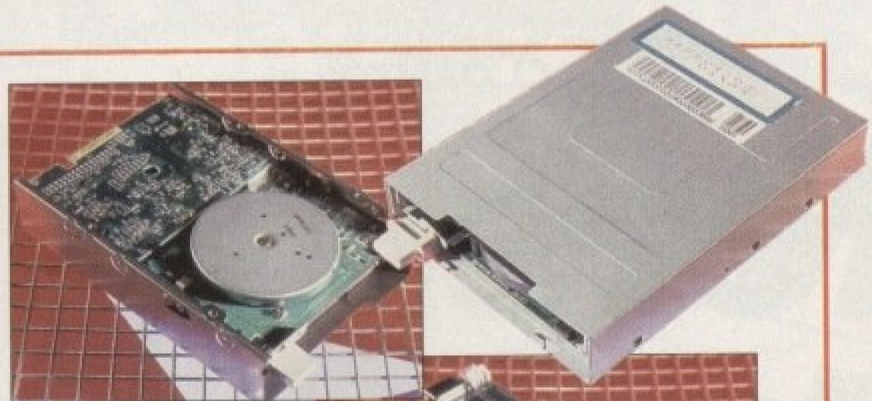
Considering that even Power's economy drive features Anti-click, the Cumana is beginning to look over-priced. It seems to be cashing in on its reputation, and in fairness when it comes to reliability it's unbeaten in the tried and tested stakes.

Internal drives

These days floppy drives tend to be very reliable, but after years of rough treatment from the user things can go wrong. Fortunately, replacing your drive is pretty inexpensive.

For the A500, Total Computer Supplies and Power do replacements for £36 and £30.95 respectively. Power also offers a replacement for the A2000 at £30.95 and the A600/1200 at £35.95

More interesting is the fact that you can get the acclaimed XL drive as an internal for the Amiga range, and the A4000 version fits perfectly snugly beneath the original drive without any need for case cutting.





Above and top right are two basic internal drives for the A500. But for more capacity, go for Power's XL, right

Amitek

Price: £59
Supplier: First Computers
Tel: 0532 319444

If Power's unit offers the best value, this petite little number (oh dear, I've been looking at these things for too long) has the best looks. Considerably smaller than any of the competition, it's the one to go for if your desk tends to get cluttered.

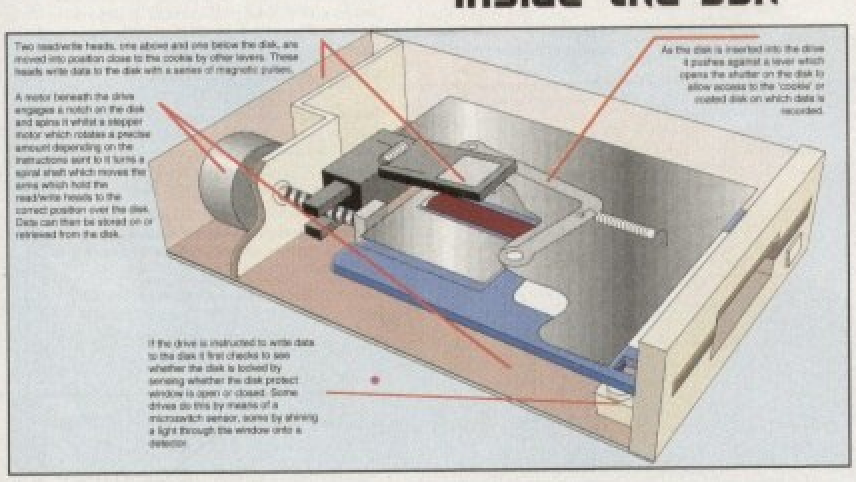
It's also got all the features you'd hope for on a modern drive, like Anti-click and Anti-Virus facilities. These are combined with the usual port and switches that are standard with drives these days.

The metal casing makes for a robust build quality which is reflected on the inside by the reliable Sony 3.5" mechanism. What's more, its colour matches your Amiga.

It costs a bit extra for this more compact unit, but if size is important and you want all the features, it remains both desirable and affordable. And if you had any doubts about it being just a pretty face as far as Amiga drives are concerned, there's a two-year warranty to back it up.



Inside the box



Information is stored on your floppy disk in a series of rings known as tracks. Data is either read from or recorded on to a diskette via a read/write head within the floppy disk drive.

The way it works is fairly simple. Inside the drive, the diskette spins while the read/write head moves back and forth across its radius, using each track and then moving on to the next.

Information from the computer is stored by converting the binary data that the Amiga CPU uses into electromagnetic pulses. The diskette is coated in a magnetic material that will record the pulses emitted by the read/write head. In order to bring the information back, the read/write arm moves over the disk again, reading the magnetic pulses and converting them back into the binary numbers that your computer understands. In fact, it's not too different to the way your standard audio cassette works.

Furthering your floppys

You can make the most of your drives by ensuring they're well maintained and that you have the right extras to maximise their potential, so here's a few suggestions.

X-Backup Pro

Price: £39.99 Supplier: Siren
Tel: 0500 340548



Having a second drive can make copying a much more convenient process, and X-Copy allows you to utilise this advantage to the full. The package combines the necessary hardware and software and has already been highly acclaimed.

It's the best program to use if you want to back-up protected commercial software. Unfortunately, this makes it a useful aid to software pirates as well. The program can copy from hard-drives as well as floppys, it has a friendly and attractive user interface and includes a number of useful utilities as part of the software.

Disk Expander

Price: £25 **Supplier:** Gasteiner
Tel: 081-345 6000

A worthwhile investment for anyone running out of memory space, this will compress files by up to 70 per cent on both your hard drive and your floppys. It boasts high speed compression and high data security during the process.

Alternatively, you can get a program to compress files on your floppys only from Power for £10, or get it free if you buy the PC880B included in the review.

Disk Cleaner

Price: Approx £2
Supplier: Available anywhere.

Dusty environments and computers do not mix well, so it's advisable to take a few precautions. Keep disks in boxes, otherwise they'll collect dust which will then get into your drive when you use them.

With Amiga drives lacking a flap, always keep a floppy in them when the computer's not in use to keep dust out. Investing in a disk cleaner is a further option, though some believe that these do as much harm as good.

public sector



Dave Cusick has a typically titillating ton of treats on test...

The European food mountain was but an undersized hillock in comparison with the towering pile of PD-packed jiffy bags that arrived this month. As ever, the subject matter varied considerably. Special mention must go to an audio cassette produced by James Matthews, using his machine to produce such wonderfully titled pieces as 'Cybernetic Love Child (Live)' which is available from Roberta Smith DTP. Slightly less wacky, but no less outstanding, feast your eyes upon the following offerings...

Roketz

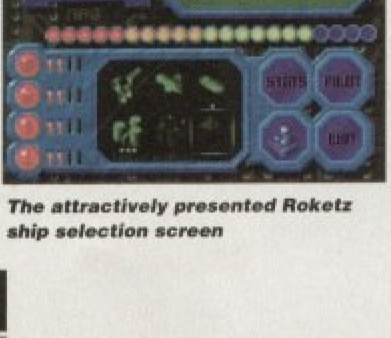
Programmed by: The Farm

Available from: 17 Bit Software
Disk No. 3366

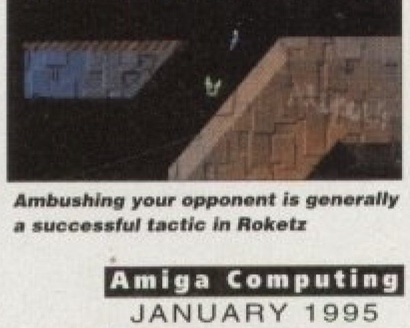
Games inspired by that 8-bit classic, Thrust, seem to be very much in vogue these days, but edging ahead of the rest of the field is this stylish offering from The Farm. Incidentally, they're presumably not the same people responsible for that curious 1990 hit 'Groovy Train' and other such memorable musical 'masterpieces', since they appear to be based in Estonia. Either way, they have created a polished and extremely playable shooty-race affair in Roketz.

Although this is a slimmed-down version of the full game, featuring only two tracks instead of six and giving little choice when it comes to choosing ships, there's enough here to convince most people that registering is worthwhile. The basic objective is to beat the opposing player – either controlled by another human or by the computer – by causing them to lose all their lives. However, there's more to the game than simply shooting one another, because added 'mood' points and experience can be gained from putting in faster lap times.

Many nice touches include the option – even on this demo version – to save your pilot records to disk. This adds an extra dimension to the game as you strive to maintain a good record against all comers. This addition and a combination of exquisite graphics, beefy sound effects and slick, moody music make this one of the best shareware games to appear in a long while.



The attractively presented Roketz ship selection screen



Ambushing your opponent is generally a successful tactic in Roketz

Titanic

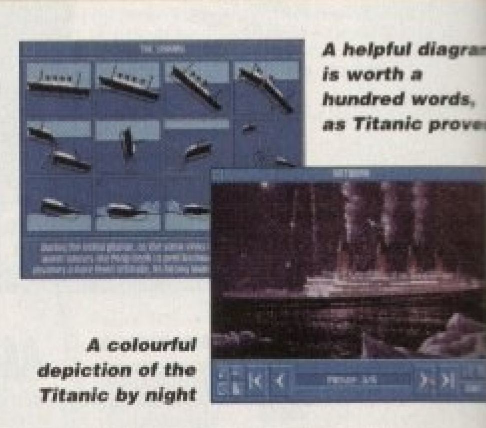
Programmed by: Paul Thompson

Available from: Central Licenceware Register
Disk Nos CLE54 a/b

The superb multimedia authoring package Helm seems to be very popular among Amiga owners interested in producing educational programs. Presented in a virtually identical format to Tutenkhamun (reviewed last issue), this program offers a user-friendly way of learning all manner of interesting facts surrounding the ship. It also recounts, in exacting detail, the events of that fateful night of 14th April 1912, when at 11.45pm the Titanic clipped an iceberg which caused it to eventually sink.

A series of high quality colour pictures can also be accessed, and many pieces of information are effectively transmitted through some well-drawn diagrams. Obviously, a great deal of research has gone into this production and the level of detail cannot really be faulted.

Unfortunately, the whole thing is let down



A helpful diagram is worth a hundred words, as Titanic proves

A colourful depiction of the Titanic by night



SeaQuest DSV must have heavily influenced the raytracer responsible for the Phosphor Dot disks

Phosphor-Dot Preview

Produced by: Simon Lee

Available from: TBA

This disk of four particularly impressive ray traced pictures is really a preview of things to come. A CD by the name of Phosphor-Dot is due to be released in the next few months containing many more images, hopefully with the models used to create them too.

Plenty of time and effort has obviously gone into the creation of these pictures, quite aside from the time they must have taken to render. They were produced using Lightwave and Imagine 2, and were clearly inspired by such Amiga-reliant science fiction TV shows as Babylon 5.

The graphic artist responsible hopes to break into the world of commercial graphic artistry. In the meantime, these pictures should be appearing in PD libraries, and if they're representative of the CD as a whole then it should be one to watch for.

Pub Games Collection

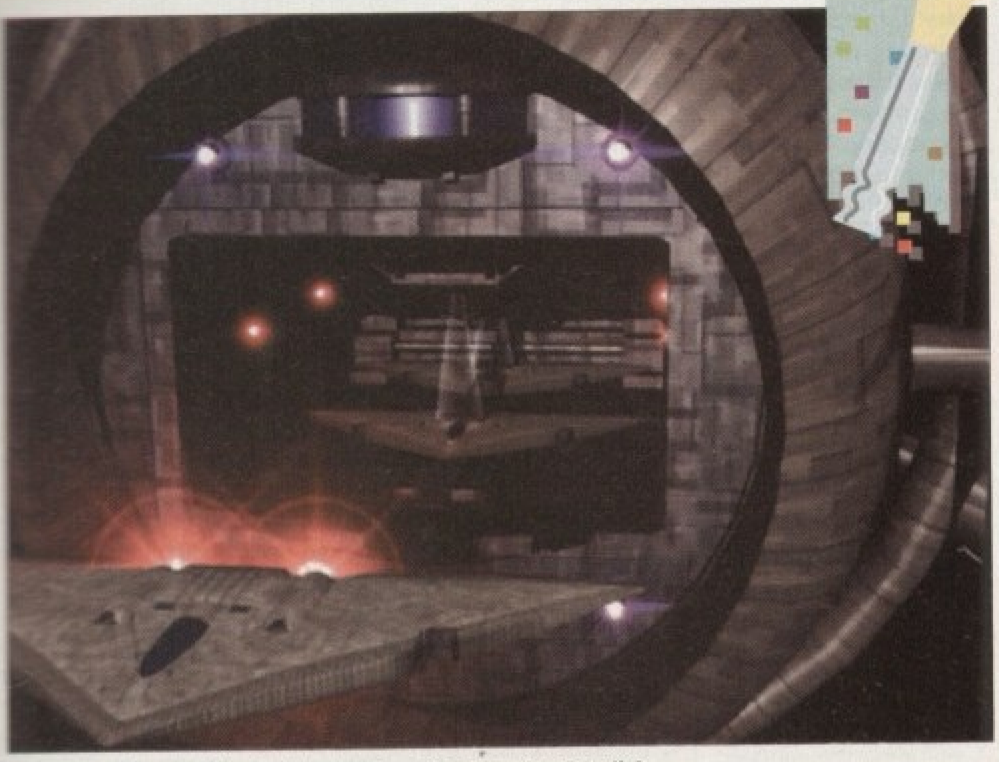
Programmed by: Various

Available from: Your Choice
Disk No. GA 549

I can't actually recall ever entering a pub and seeing people indulging in a game of checkers or dominoes but nevertheless, they make an appearance among the five offerings on this disk.

By far the best game here is Pub Darts, a deceptively addictive little number that sees you either competing against Amiga-controlled opposition in one of two tournaments, or attempting to outdo a human opponent. To throw the darts, use the mouse to move a large hand that is floating in front of the board – this wobbles with

ART of the MONTH



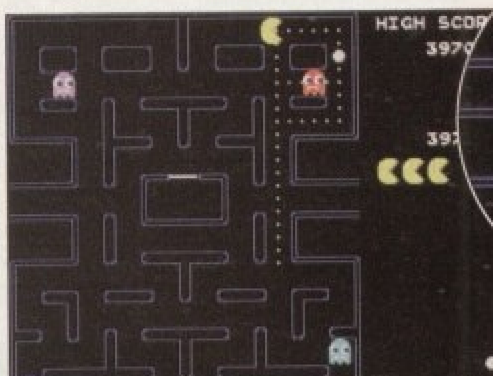
An impressive starship docking bay from the Phosphor Dot disk

by a large number of spelling mistakes – most probably the result of some hasty typing which wasn't thoroughly checked. This is particularly disappointing in an otherwise excellent educational program, because it might mean that schools which could have put such a program to great use are discouraged from doing so.

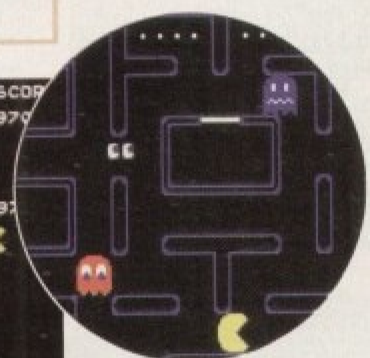
Classic Pucman

Programmed by: Augenblick Designs

Available from: Augenblick Designs



A blast from the past, Pacman – sorry, Pucman



Get your own back on the ghosts by consuming that suspicious flashing dot

Old concepts die hard, it would seem, as yet another remake of a golden oldie appears on the scene. A cunningly switched letter in the title is about the biggest change between this and the coin-op classic Pacman, other than the fact that this one won't gobble ten pence pieces at an alarming rate.

Graphics remain fairly true to the original as does the sound, accurately reproducing the bizarre chomping noises and that strange sound effect that followed eating one of the four big flashing dots. Ah, the memories come flooding back...

In fact, one of the few differences between this and the original seems to be the difficulty level – I'm sure that Pucman is slightly harder. It might simply be lack of practice, but I swear the flashing dots only seem to endow our chomping chum with invincibility for a few extremely brief moments. Whether, after all these years, the game will still seem as magically addictive and absorbing in the long term remains to be seen, but it must be said that this is a competent and accurate effort at recreating one of the most famous games of all time. It costs £6.50 and can be obtained directly from Augenblick designs.

Calling all PD libraries...

...and individuals with absolutely any program, whatever its purpose, which you consider worthy of review. Whether it will be freely distributable public domain, shareware or licenceware, if it's of sufficient quality to merit coverage then stick it in a jiffy bag or padded envelope and send it in with all haste. I promise I'll at least look at your work. Please clearly label the disk, and include a cover letter supplying a description of the disk contents and some basic instructions. The address to send the disks to is:

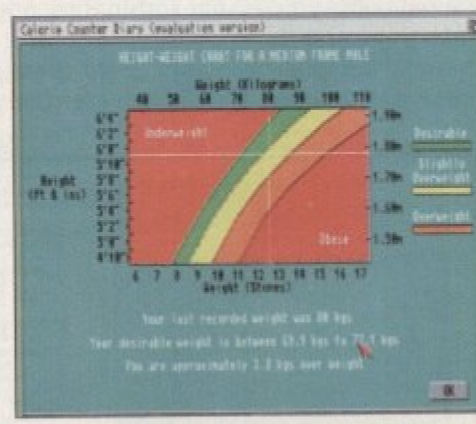
Dave Cusick
PD submissions
Amiga Computing
Media House
Adlington Park
Macclesfield SK10 4NP

Calorie Counter Diary

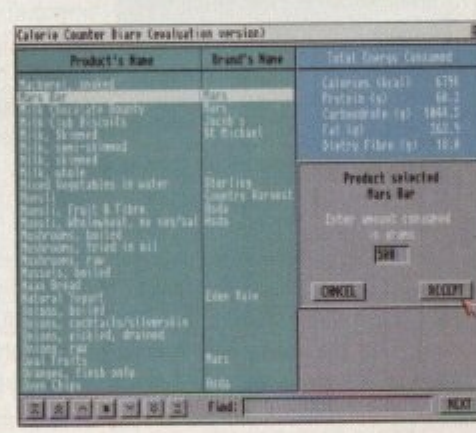
Programmed by: John J Cassar

Available from: John J Cassar

There are two kinds of dieters. The first kind, by far the most common, refuse to accept anything with cream in it for about ten seconds, and then scoff it and proclaim that 'I'll start dieting next week.' The second type ➤



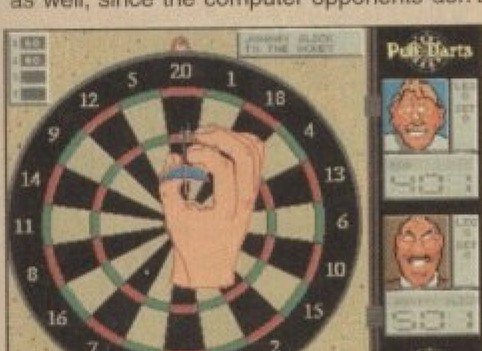
How charming to be told by a computer you are slightly overweight. Fortunately that's not me – I was only testing out Calorie Counter with made-up data...



If you're an impulsive chocolate eater then Calorie Counter could be the ideal way to control your diet

varying degrees of violence according to the difficulty setting.

Fortunately, obtaining consistently high scores is rather easier than in real life – just as well, since the computer opponents don't generally miss chances to win. Three ways of playing are on offer; the standard 501 and 301 games, and Football, where players score goals by pushing the 'ball' from one side of the board to the other by hitting certain numbers.



There's nothing like a decent game of arrers down the local. All the fun of darts with Jim Bowen nowhere in sight

Cash Fruit, unsurprisingly a fruit machine simulator, isn't bad either, although it is perhaps a little easy to rack up huge amounts of winnings. Still, it's nicely presented and fun for a while, and it's definitely not the worst example of its genre.

All in all, while this is hardly an essential compilation, the two standout games might make it worth a look. It also costs just under a quid – that's less than a lottery ticket – and if I was feeling especially cynical I might be inclined to say you've got more than a one in fourteen million chance of enjoying this disk.

The History of the World Cup

Programmed by: Gerard Fitzpatrick

Available from: Gerard Fitzpatrick



Famous moments from the 1990 World Cup, the closest England have ever been to winning it a second time

It's incredible how dramatic footballing moments stick in the mind. Who, for instance, can forget the agonising moments of the England v West Germany penalty shoot out in 1990? And Diego Maradona's use of the so-called 'Hand of God' four years before? This Helm-based production offers the chance to relive these incidents and learn a lot more about the history of the competition at the same time.

Every scoreline ever is included, from qualifiers to finals, and there are digitised pictures of key moments and promotional posters, records of each country's performance since the competition began, and all manner of other fascinating details. The three disks appear to be jam-packed with statistics – in fact there's so much there that the only way the author could fit everything in was to use the fast file system disk format, so a WB2+ machine is essential.

Searching through all the information would be a nightmare were it not for the thoughtful design and clearly marked buttons. While potentially not as useful in an educational sense as the Titanic disks, the World Cup history will perhaps appeal to a broader audience. It's evident that this has been a labour of love for the author, and football fans everywhere are bound to find it interesting. It is available for a fiver direct from the author.

➤

are the people with really strong willpower, who prove just how much can be achieved by seemingly losing about half their bodyweight in a few weeks.

Contrary to what certain adverts for delicious, nutricious shakes may say, of course, the reality is that doing so isn't easy and the true dieter will be closely scrutinising the nutritional makeup of everything they eat. Until now, keeping such close tabs on every last morsel consumed could have proved a painstaking ordeal, but fortunately one thoughtful soul has realised that a user-friendly computer program could greatly ease this process. Calorie Counter Diary keeps separate files for each individual who uses it, making it ideal for use in weight-watching groups. It requires WB2 and makes full use of the standard intuition interface, making performing operations simple and speedy. Users enter the items they've consumed by selecting them from the scrolling food list, and the program quickly calculates the nutritional composition of the day's menu and compares it with the recommended intake.

Disappointingly, the program did crash a couple of times at the same point – when the weight progress chart was called – but hopefully such bugs will not be in evidence in the registered version, which costs a tenner and is available from the author.

Santa and Rudolph Do Christmas

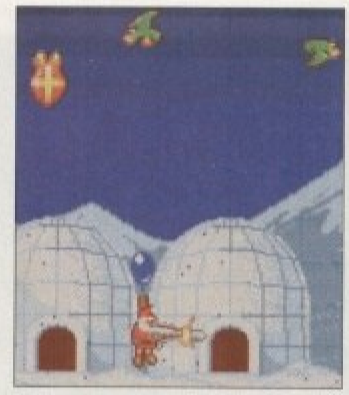
Programmed by: Ian West and Jon Eggelton

Available from: 17 Bit Software
Disk No. 3361

A seasonal game combining rocket launchers, mysterious UFOs and all manner of other bizarre touches, Santa and Rudolph Do Christmas has you assuming the role of one of our two heroes to prevent a suspicious hooded gentleman from spoiling Christmas for everyone. You must fly about dangling from a gas-filled balloon, collecting presents as they zoom past and delivering them to the windows and doors of eager youngsters the world over. In the process however, you must blast or dodge a variety of baddies from penguins and green birds to sand monsters and passing lorries. Bonuses can be picked up including Christmas puddings and glasses of sherry.



Santa generously donates a rocket to some lucky person's present pile



Rudolph distributes a few presents with the aid of a stunningly manoeuvrable balloon

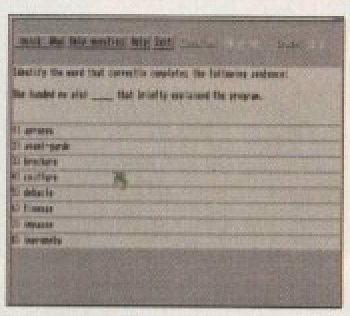
While all this is going on, jolly festive tunes such as Mister Santa, Jingle Bells and Rudolph the Red-Nosed Reindeer are tinkling away in the background. Comical graphics and sound effects such as 'Ho ho ho' and 'Merry Christmas' add to the general cheerfulness of the proceedings.

Admittedly the gameplay doesn't vary from one level to the next, so things might get a little repetitive, but this is quite a challenging game and it does seem to possess an addictive quality that could see you pulling this one from the disk box sometime in mid July for a quick blast.

Student Aid 2

Programmed by: Rick Rojas

Available from: Robert Smith DTP
Disk No. E080



If Student Aid 2 can be a help, then it looks like this student could certainly do with a copy



Progress can be checked using the Student Aid view grades option

Student Aid 2 claims to offer the ultimate way of improving your grades, by offering a selection of pre-designed multiple choice tests and allowing you to create your own. The idea is that you repeat tests over a period of time and the marks are saved to disk so that any improvement can be seen. The tests supplied give a good idea of what the program is capable of, covering a variety of subject areas from basic psychology to humanities – although I'm sure a couple of the answers are actually wrong. Entering the answer is a simple case of pointing and clicking.

Entering your own tests is simple too, although don't bother spending a great deal of time doing so with this demo version as it can't save them to disk. To be able to store tests you'll have to register – and it's here that Student Aid 2 falls down more than a little. Mr Rojas is asking nearly $35, which at around £25 is a little pricey for the average student. The idea of having such a program handy rapidly loses its appeal when you discover this section of the on-disk manual. It's a shame really, because the program has genuine potential and would have been helpful to a lot of people.

Lay your hands on me

17 Bit Software
1st Floor Offices, 2/8 Market Street,
Wakefield, West Yorkshire WF1 1DH
Tel: 0924 366982

Your Choice
38 Lambton Road, Chorlton,
Manchester M21 0ZJ
Tel: 061-881 8994

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TS4 2NU

Central Licenceware Register
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John J Cassar
31, St Mungo Avenue, Townhead,
Glasgow G4 0PG

Gerard Fitzpatrick
19 Glenhill Road, Finglas, Dublin 11,
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2336 OPTICOMMS II for use with modem
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2350 POOL TOOL - predict horse races with best chance
2351 RACE RATER similar to above, buy both
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2726 AREX MANUAL complete manual. Highly rec
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3254 ELECTRIC TRAIN SET simulate
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3268 SCUB-BUSTER destroy enemy Scub Missiles
3271 AVINA BLUE fast action shoot 'em up
3272 TANK BATTLE 2 player tank battle game
3274 MR DUG like DUGGER in the arcades
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3356 WONDERLAND amazing graphics, recommeded
3361 CHINA CHALENGE II new tiles game
3366 BINGO CALLER full speech caller
3367 CARD GAMES collection
3368 WIZARD-DOMAINS dungeon type games
3380 SHOOT EM UP COLLECTION I many
3381 INFERNO I Tertis with a twist
3384 OTHELLO best PD version
3386 MOUSE IMPOSSIBLE very addictive recommended
3389 CASINO GAMES - all gambles, get this disk
3390 TETREN most polished Tetris ever released
3392 STRIKEBALL brillant baseball clone
3400 FIGHTING WARRIOR like Street Fighter
3403 CASTLE NOMIS good dungeon master
3404 DOMINOES only one of its kind on PD
3406 TOTAL WARS -strategy like Chess in Space
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3410 FATAL MISSION Excellent Nemesis clone
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3523 MYSTERY 241AD graphic adventure
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3528 MICRO MARKET Very good stockmarket game
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3665 TIME RUNNER (WB 2/3) Brillant graphics
3667 GOLF (2 DISKS) One of the first PD Golf Games
3668 AMOS CRICKET 2 New Amos cricket simulator
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4072 LIFE'S A BITCH (18+ only)
4073 IT'S MENTAL III (rude jokes 18+ only)
4106 SPACE ANIMATION Brill x-wing anim
4138 KYLIE (2 disks) pics & songs
4179 THE LIVING WORLD SLIDE SHOW creepy-crawly
4215 MADONNA III Brilliant Madonna pics
4231 ALIENS II the best Aliens
4246 GARLOWEEN A NIGHTMARE ON 13 STREET
4248 PERVERSE SLIDES Very funny, but rude, pictures
4250 MANGA COMIC stunning Japanese chic etc
4320 GORE very scary, not for the faint-hearted
4414 MANGA WORLD III latest in SUNTEAN products

2330 WB 2.0 EMULATOR

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18 DEMOS

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SABRINA SPECIAL
DIE FILKINGER
MADONNA EARLY DAYS
KATHY LLOYD
MEGA-MAID
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A1200/A4000

AGA001 EXTENSION DEMO with fast landscape No 1 anim and a rotating city, still regarded as the best AGA demo
AGA002 FRACTAL GENERATOR fractal in 256 colours
AGA003 WORKBENCH HACK many hack/toy/blanker etc
AGA006 NEW SUPER KILLER know & kill over 316 types of virus. Must for all A1200 owners
AGA007 MINDWARP the very first demo for the A1200
AGA008 KLONDIKE DELUXE AGA (3D) Simply the best card games with glamorous ladies as card face. 18 + only
AGA011 SLEEPLESS NIGHT 3
AGA012 PLANET GROOVE Truly A1200. Demos
AGA013 MOTOR INVADER 2 (2D) Very playable INVADER set inside your computer. Loads of fun
AGA015 POINT OF SCALE Great A1200 only demos
AGA016 CHROMAS Fairly good demo.
AGA017 WORLD OF MANGA AGA (4D) Brillant Japanese comic slideshow. Includes Japanese Chick etc, recommended, still the best seller on the A1200 - brilliant
AGA021 MAGIC WORKBENCH Improve your WB & add some functions to your WB. Really BRILLANT
AGA022 WB 3 UTILITIES loads of WB 3 only utilities like degrader etc. Not for beginners
AGA023 U-CHESS the best chess program game so far, but requires 4 megbytes. Brilliant graphics
AGA024 WORKBENCH 3 SCREEN Great backdrop for A1200 (not beginners)
GIF BEAUTIES is one of the highest quality girl pictures available(1-10)
AGA41 GIF BEAUTIES (1-10) This Bodyshop collection contains stunning pictures of raunchy women who don't seem to be wearing many clothes
AGA62 BODYSHOP 1 More of above
AGA64 BODYSHOP 2 (2D) More of above
AGA66 BODYSHOP 3 More of above
AGA68 BODYSHOP 4 (2D) More of above
AGA70 BODYSHOP 5 (2D) More of above
AGA72 BODYSHOP 6 (2D) More of above
AGA74 BODYSHOP 7 (2D) More of above
AGA80 FITCHICK 1 See BODY SHOP for description
AGA82 FITCHICK 2 (3D) See AGA41 for description
AGA84 FITCHICK 3 (3D) See AGA41 for description
AGA90 ASSASSIN A1200 FIX DISK 1 - Brillant collection of degraders that should get most of the old A500 games/software to run on the A1200. A must for any A500 owners, just upgrade to an A1200. Recommended
AGA091 ASSASSIN A1200 FIX DISK 2 (new) like above but with new collection (different) degrader. Recommend you buy both disks - super
AGA094 RELOCKIT V1.4 latest. Run A500 SOFTWARE
AGA097 A1200 UTIL - AGA TESTER, SYSINFO etc
AGA099 MADFIGHTER 2 brilliant Streetfighter clone
AGA100 AGA BLITZ SCREEN BLANKER
AGA101 FAST GIFF 2 display GIFF pics in Workbench
AGA102 AGA DIAGNOSTIC - NEW system tester
AGA103 BLACKBOARD AGA decent image processor
AGA104 REND 24 Similar to above
AGA105 QUICK GRAB AGA -can grab AGA screen
AGA110 WORLD BEYOND 1 (3) stunning 256 COLOUR fantasy art. Leaves Atari users breathless
AGA114 SMELL LIKE CHANEL No. 5 brillant demo
AGA121 MAGIC FACTORY 1 STAR TREK (6 disks) Best ray trace pictures ever released on the A1200
AGA133 AGA UTIL v1 AGA util compilations
AGA134 AGA UTIL v2 more AGA util compilations
AGA135 AGA UTIL V3 more of above
AGA136 AGA UTIL V4 even more of above
AGA137 IMAGE PROCESSOR IFF picture processor
AGA138 MULTIBOOT 4 various versions A500 EMU
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NEW TITLES

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2802 SNOOP DOS V3 - will tell you why some programs refuse to work - a must utility for all Amigas
EXTRA SPECTRUM GAMES VOL 1-25 NOW AVAILABLE
AGA141 FERRARI ART 2 (2D) load of Ferrari & ray trace
AGA142 SUPER LEAGUE 3 latest manager games
AGA144 SPEAK & SPELL educational software for kids
AGA145 BIG TOPS (18 + only) Hmmmm
AGA146 KELOG LAND brillant platform game, get - a must
AGA150 ACTION REPLAY V5 - NEW UPDATE TO V4
AGA160 GIGER TRIZ very playable 256 colour Tetris
AGA162 FATAL BLOW new STREET-FIGHTER 2 clone
AGA164 CINDY CRAWFORD Vol. 1 (2 disks) latest release
AGA166 INFESTATION (2 disks) The ultimate AGA demo
AGA168 AGA SPECTRUM V1.3 special AGA version brill
AGA170 CINDY CRAWFORD Vol. II (2 disks) amazing
AGA172 VIDEO TRACKER AGA - ultimate demo maker
AGA174 MAGIC WB EXTRA vol. 1 & 2 (2 disks)
AGA180 GIF BEAUTIES Vol. (11-18) 8 more girlie disks
AGA188 FRIDAY AT 8 - another brilliant AGA demo
AGA190 ASSASSIN MULTIVISION AGA pic viewing util.
AGA192 ALIEN FRENZIE 2 player blasting + power up
AGA194 BIG TIME SENSUAL (2 disks) SPACEBALL 2
AGA200 MASQUERADE 2 disk brilliant puzzle game
AGA202 RAM JAM 94 it can't be done (2 disks)
AGA203 EXPLICIT 3 DEMO new effects well done
AGA204 COMPLEX ORIGIN 2 disks requires 2 disk drives
AGA206 TREASURE OF TUTANKHAMUN - educational tool
AGA210 CHANEL 2 DISK MAG (2D) A1200 disk magazine
AGA220 KLONDIKE NEW CARD SET - (7 disks)
AGA230 LOVE 2 disks - simply brilliant
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AGA234 KNOTTY - Stunning AGA sliding picture puzzles
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1161 CLI & SHELL TUTOR (help) Ideal for beginner
1162 DELUXE PAINT GRAPHIC TUTOR V3 & 4 Recommended
1163 JAPANESE - teaches you the Japanese language
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1167 WORD POWER - spellchecker/crossword solver/teach
1163 CROSSWORD CREATOR - design crosswords
1165 CHESS II & TUTOR brilliant Chess II games
1166 PAINT IT (not A500 1.3) latest COLOURING BOOK
1169 HISTORY OF AVIATION Vol 1 Excellent disk
1171 CHILD FAVOURITE
1175 FRANTIC GUIDE TO COMPUTERS (2D) brilliant & funny
1177 CYBER PUNK 2 for Cyber Punk freaks only
1181 SIGNATURE CREATOR customise your own signature
1182 VIRUS WORKSHOP V4 comprehensive guide
1175 MAJOR LEAGUE
G680 SPACE INVASION 2 - Fantastic Galaxian clone
G681 AUTOMOBILES - PD version of SKID MARK brill
G682 BANDIT MANIA - Brilliant fruit machine demo
3732 DITHELL IN SPACE massive exploring, ea-shoot game
3735 OVERLANDER Brilliant arcade MOON ALERT clone
3737 SERIOUS BACKGAMMON The best backgammon ever
3777 UN-SENSIBLE SOCCER Amazing, a true Gem. This is the most, if not the best PD SOCCER game. Brilliant
3782 SOLO ASSAULT 3D like Wing Commander on the NES
3785 THE GREAT GOLD RAID - simple but extremely addictive
3786 NANO FLY Superb exploration type game. Recommended
3787 ANT WAR V1.5 (Latest) not 1.3
3790 GREEN FIVE Amazing graphics just like Flashback
3771 STAR WOID (2 Disks) Brilliant Thrust clone
3774 TRICKLE TREAT - this is DOOM II on the Amiga
3790 TASK FORCE very good MIND SHADOW clone
3791 PROFESSIONAL BINGO CALLER
3792 MARTIAL SPIRIT brilliant STREET FIGHTER II
3802 BOULDER DASH COLLECTION 1-6 brilliant (5)
3851 NUMBER TRIZ (WB 2/3) like Tetris with numbers
2790 WINDOW BENCH V2 (WB 2/3) 2 disk replacement
2793 STAR PRINTER STUDIO
2808 PRINT A CARD + many Christmas cards
2832 DIVIDEND WINNER Brilliant pool predictor
2850 EAGLE PLAYER (2 disks) best music player
2870 PRO GAMBLE very latest horse prediction
2880 D.M.S. V2.03 (not WB1.3) update to V2.00
2881 SONIC DRUM V2 drum sound with no hardware
2882 DISK COPY Collection of 10 disk copies
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3360 RANDOM DOT STEREOGRAM generator not 1.3
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M379- KYLIE MINOGUE (2D) full song 'MADE IN HEAVEN'
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amiga update

The best gets better

Vlab Motion audio video excellence

As promised during last month's *Amiga Computing* exclusive on the latest release from MacroSystem, we promised a VLab Motion update as soon as the next software release appeared.

True to our word, that's exactly what this month's update column will be concentrating on. In short, this latest release quite simply takes Amiga DTV into the next dimension.

Although last month's column pointed to many up-and-coming features, it transpires that the reality of this latest release far exceeds even our expectations.

Courtesy of a recent trip to Cologne, *Amiga Computing* was lucky enough to get hold of the very latest Beta copy of the new and improved MovieShop software.

Obviously the key feature for the vast majority is the promised link between audio and video editing – thereby providing the Amiga's first true off-line editing system.

Not surprisingly that's exactly what MacroSystem has achieved, with both mono and stereo recording and playback ranging from 8-bit quality to full 16-bit CD/DAT – all courtesy of the Toccata direct-to-disk sampler.

However, to achieve the seemingly impossible combination of audio/visual clarity and linked frame accurate editing, MacroSystem has been forced to make one fairly dramatic change to the systems handling of audio.

In the previous release, the audio files could be stored on any AmigaDOS volume. However, this obviously wasn't the ideal approach and MacroSystem has now opted for the same dedicated drive approach as used for video storage.

This doesn't mean you need to invest in a specific make of drive, but it is true that the volume selected for audio recording does become inaccessible to AmigaDOS. During testing we used a volume/partition which was roughly a quarter of the video drive and this appeared an ideal combination. In addition, straightforward AV recording of the system also allows the auxiliary inputs on the Toccata to be mixed with the video soundtrack, thereby offering an ideal method of adding backing tracks or voice-overs during recording.





ADPro style DVE's may take some time, but it's a lot cheaper than investing in a Video Toaster...

BOASTING

As mentioned, the software now boasts automatic AV cut and paste when assembling scenes from a variety of shoots, but better still, the audio element also boasts envelope control over pre-recorded audio.

Now when a scene is dropped into the timeline, clicking in the scenes graphic produces an audio control requester which enables the input of split points for audio control. Add a split towards the beginning and end of the scene, adjust the controls accordingly and you have an envelope which slowly fades up to full volume and then fades down towards the end of the scene.

However, this is an envelope in its simple form, in fact it's possible to add as many control points or splits as you require to define the perfect audio accompaniment to the scene.

As a result, the audio can drop down to accommodate a voice over, sound effect or whatever else. When you're happy with the overall effect, all that remains is to re-compile the audio track to make your edits a permanent feature.



Excellent image quality, unbeatable off-line editing, plus 16-bit stereo sound



VLab-Motion quite simply sets new standards for Amiga digital video

Internal DVE's

As mentioned earlier the new update brings even more to the software than anyone could have hoped for. Obviously, the AV link is the option we've been waiting for but to compliment that, MacroSystem has taken the dramatic step of including ADPro style operators as standard.

In the past the only way to produce pseudo digital video effects via software was to export individual frames or fields, add the effect via your favourite image processor, and re-import the end results back into VLab Motion.

Now the operators are built-in, such hard graft is a thing of the past. The beta version boasted only a relatively small collection as standard, but MacroSystem promises many more in the final release. Thanks to the aforementioned operators, it's possible to crossfade, wipe and composite scenes together to produce the kind of effects only previously available to Toaster users.

In short, just about anything is possible via the software emulation of DVEs – colour negative, line art and of course video compression effects such as live video mapped on to an assortment of animated objects which can fly in over yet more live footage in the background.

Not surprisingly, such effects are by no means instantaneous as the software must first process the individual frames to create the required affect.

However, the really good news is that operators can be combined on the same piece of footage by simply dragging more user-definable operators into the timeline. The end results give live footage which has been processed by a number of operators incorporated over a live backdrop.

As if that wasn't enough, the process can be repeated on an unlimited number of scenes which can then be combined to produce a multitude of live colour-corrected and compressed video sequences moving around the scene above yet more pre-recorded full screen video in the background.

Obviously, such complex productions take quite some time, but if you're willing to invest the effort the end results can even be beyond the reach of the PAL Toaster.

Quite simply a spectacular product that just keeps getting better. Although still in the Beta stage, the finished version should already be shipping by the time you read this article.

NEW GENLOCK FROM RENDALE

At last, the new Super-VHS genlock from Rendale is available. The Super-9402 is a true S-VHS genlock, offering high quality output, together with other features. It offers the ability to fade Amiga graphics in and out, and also to cross fade between Amiga graphics and your video input. Various extra modes are offered, including two keyhole modes.

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Piecing it all together

assembler language

Part 6

Paul Overaa provides some final notes on the code for his example text file reader program

Over the last five issues I've taken some code that opened and closed a few libraries, added window opening code, menu and ASL requester handling, and the routines used for loading files into memory.

Last month, after covering the basic arrangements used by all Amiga devices, some console device code was also added and this allowed text files to be displayed. The result – a simple Intuition based text file reader program that allows users to move through selected text files using the up/down cursor keys.

Although the program is still really just a skeleton framework it is functional enough to do its job and it should at least have provided you with some ideas on how 680x0 Intuition programs can be constructed.

In this last instalment I'm going to concentrate on some of the loose ends that, to-date, I've deliberately not mentioned – beginning with the use of the official Commodore include files.

If these are available then there is little point in retaining the large number of system definitions that occur at the start of my program – we just include the appropriate system files instead! Similarly if, like Devpac, the assembler package provides files containing the LVO function offsets then it's safer to include these files rather than type in your own explicit LVO values.

In the final version of the code provided on this month's cover disk you'll see that this is exactly what I've done and the result of making such changes is that the start of the program now looks like this:

```
incdir df0:include
include         exec/exec.i
include         dos/dos.i
include         intuition/intuition.i
include         libraries/gadtools.i
include         libraries/asl.i
include         devices/conunit.i

include         exec/exec_lib.i
include         dos/dos_lib.i
include         intuition/intuition_lib.i
include         libraries/gadtools_lib.i
include         libraries/asl_lib.i
```

Incdir is a Devpac directive which lets you set a directory to be searched for include files. Since I was using the Devpac include file distribution disk in df0: I set the directory name to df0:include.

I must confess at this stage that one or two minor changes to the case and names of a few labels had to be made in order to get my code to assemble without error. In the official program '.i' includes the io_Data, io_Length, and io_Command fields of an I/O request are actually defined as uppercase. Also, window_SIZEOF is defined as wd_SIZEOF in the intuition.i file. Making these changes allowed me to eliminate my self-defined values and use the system (include file) versions as required.

SUITABILITY

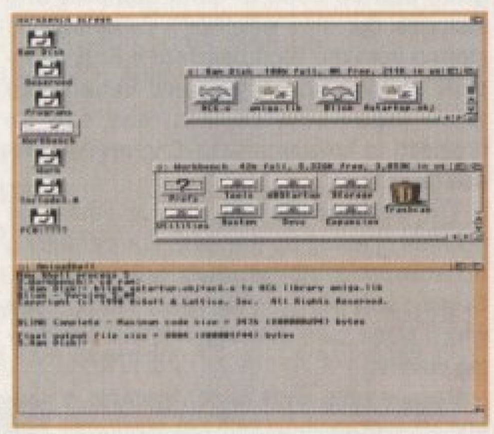
You'll often read that to run a 'suitable' program from the Workbench all you need to do is add a corresponding tool icon to it. If, for example, the program is called AC6 then you'd create an icon named AC6.info and store it in the same directory as the AC6 program itself. The program could then be run from the Workbench simply by double- clicking the program's icon.

But what exactly is a 'suitable' program, and how can we ensure that a program can be used via the Workbench? When you start a program from a Shell window you do it by typing its name followed by any parameters (arguments) that are needed. The AmigaDOS Shell process will keep on seeing this allocate some memory for a stack for your program, store a program 'stack size' on the program stack itself and then push a return address on this stack.

The AmigaDOS Shell provides your program with the address of the first character of any arguments you supplied on the command line in register a0. The character count of the command line is also available and this is held in register d0.

The important point about all this is that the Shell does NOT create a new process for your program – it transfers control to your program by jumping straight into the executable code. Because this program then runs as part of the Shell process it inherits a certain amount of run-time information (as well as the command line arguments discussed above).

Most importantly it can find out where the Shell is getting its input from and where its



Using the Blink linker tool from a shell window

Including startup code during assembly

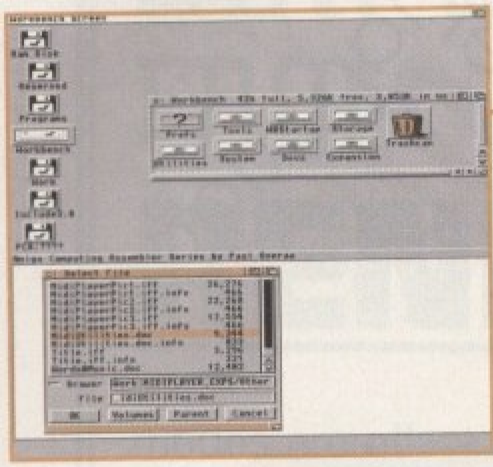
Startup code may instead be supplied as a piece of source code that can be included at the beginning of your program. In this case the assembler would generate the appropriate startup code as part and parcel of your program.

This approach is useful if, like Devpac, the assembler also allows the creation of directly executable programs. Devpac does in fact provide a piece of startup code like this called easystart.i which you'll find in the Devpac include/misc directory. This actually ends with a _main label, so if you were going to use easystart.i then the _main label in my source would have to be removed in order to prevent a 'duplicate label' error.

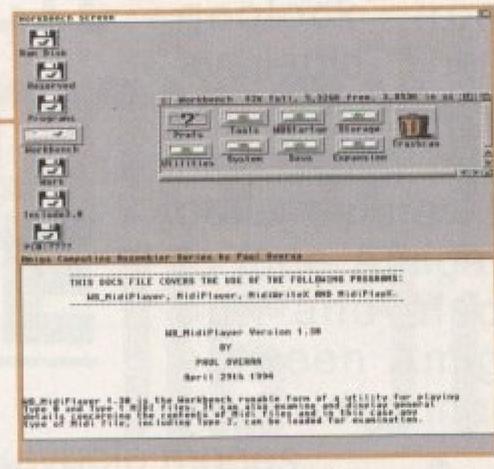
The easystart.i code itself includes other system files and with Devpac 2 the easiest way to make sure that these were also found would be to use the INCDIR directive.

If, for instance, you were reading the include files directly from the Devpac disk in df0: the include directory and misc/easystart.i file location could be specified like this:

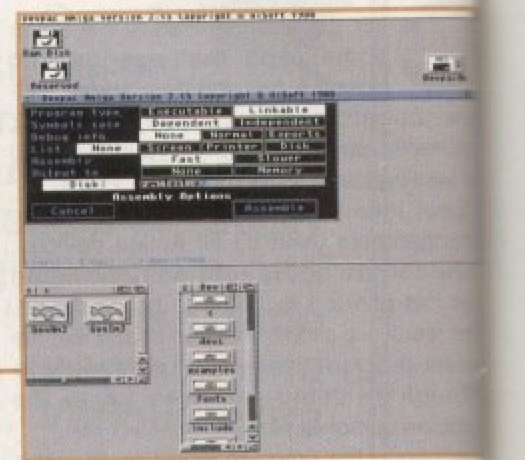
```
INCDIR     df0:include INCLUDE     misc/easystart.i
```



The first job is to select a text file



Our example program running from the Workbench just as expected



The linkable code option is needed to produce a linkable object code module

output is going (these I/O details represent addresses and are conventionally known as the DOS input and output handles).

When a program runs from the Workbench the situation is very different. AmigaDOS starts it as a completely separate process, so in this case there will not be a command line or input-output handles available. Workbench-started programs therefore need to set up their own I/O facilities and in addition to this, have to carry out some message-oriented Workbench operations.

The job of creating generally useful program startup code is quite complex and includes deciding whether a program has started from the Workbench or a Shell, possibly parsing (identifying and separating) Shell arguments so that they can be provided to languages like C in an easy-to-use fashion.

The startup code may also do other jobs such as opening up the DOS library, setting up standard I/O handles and so forth. Commodore provides standard startup code which takes care of many of these interfacing details.

Because the code is configurable a variety of startup modules are available and you, the programmer, are free to choose according to your needs. Almost all high-level language compilers and 680x0 assembler packages will offer some form of standard startup code for you to use and most also provide documentation to help with their use.

The startup code is normally based on Commodore recommendations and, if it has been written to be used with a high-level language like C, the chances are that it will expect the start location of your program code to be labelled as _main.

This, incidentally, is why I placed this label at the start of the executable code in my example program. Note that an XDEF directive also has to be added to the source in order to ensure that the _main label is visible to the linker.

In order for the programmer to make use of a separately compiled startup module the assembler has to be asked to create linkable (as opposed to executable) program code. Having done that, a linker utility is then used to add the startup code to the front of the program module, so producing an executable program.

LINKING

The standard Amiga linker is called Blink and although linking is not a difficult job, the command lines can become very long when a number of full file path/names are involved. You can of course put the necessary instructions into a batch file and automate the whole process, but initially it is probably easiest if you open a Shell window, use AmigaDOS's CD command to make the RAM disk the current directory, copy the startup module, your program object code module, the amiga.lib library and then finally blink to the RAM disk.

This will enable you to carry out the linking operations with all required files in the same place, so eliminating the risk of you mistyping directory pathnames and so on (which would cause linker errors). In fact, with everything in RAM the linking stage is easy. If, for example, you were using a startup module called astartup.obj (one of the startup modules you'll find in the current Devpac package) you'd just type the following command line:

```
blink astartup.obj+AC6.o to AC6 library amiga.lib
```

This will link the specified startup to the AC6.o object code module and would produce an executable program called AC6. Add an icon to that program and low and behold – the resulting program will be Workbench runable!

You may be wondering why the amiga.lib library has come onto the scene when we have not used any amiga.lib functions within our program? It is because the startup code module will almost certainly (definitely if you are using standard startup code) have had the names of user library functions XREF'ed – amiga.lib is needed because it contains the corresponding function LVO values!

Incidentally, I could have XREF'ed all the functions used in my example program rather than use the LVO files provided by Devpac. The only real difference is that the LVO values for the functions used in the example program would then have been resolved during the linking process rather than during the initial assembly.

Efficiency in itself

One thing I've not talked about in this series is fine tuning the code to make it as 'tight', i.e. as efficient, as possible. To my mind it is not a particularly good idea to concentrate on such things during the early stages of development, it's far better to get the general structure of the program right and to write the code in a fashion that is as understandable as possible. Only when the program is nearly complete do I start thinking about saving bytes.

A typical example of where savings can now be made, however, can be seen from the allocation deallocation routines such as LockScreen() and OpenWindow().

You'll notice that I made a point of preserving and restoring registers a0/a1 and d0/d1 (ie the scratch registers). The reason was that when those routines were written I didn't know whether code elsewhere in the final program would be depending on the contents of those registers or not.

Since the routines make system calls that destroy those scratch registers, I decided to play safe and preserve them. As it happened, scratch register preservation is not needed on those allocation/deallocation routines, so the associated move instructions can be removed (you'll see that I've done this in the final code).

last words

Although I've certainly produced a working Intuition text file reader program, there are plenty of things that would still need to be tackled if I was trying to produce a fully fledged utility. It would, for example, be advisable to check that a selected file really does contain just ASCII text.

The behaviour of my simple line-by-line display printing scheme is another area that could be improved upon – automatic wrap-around on long lines or two dimensional scroll bars could be provided. Needless to say, I didn't follow these types of paths because such embellishments would have made the resulting program rather more complex (and therefore correspondingly more difficult to understand).

● You will find last month's version and this month's final version of the source code, and the now Workbench runable version of the program on this month's cover disk.

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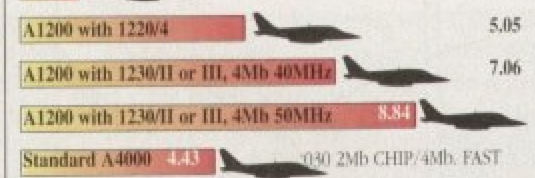
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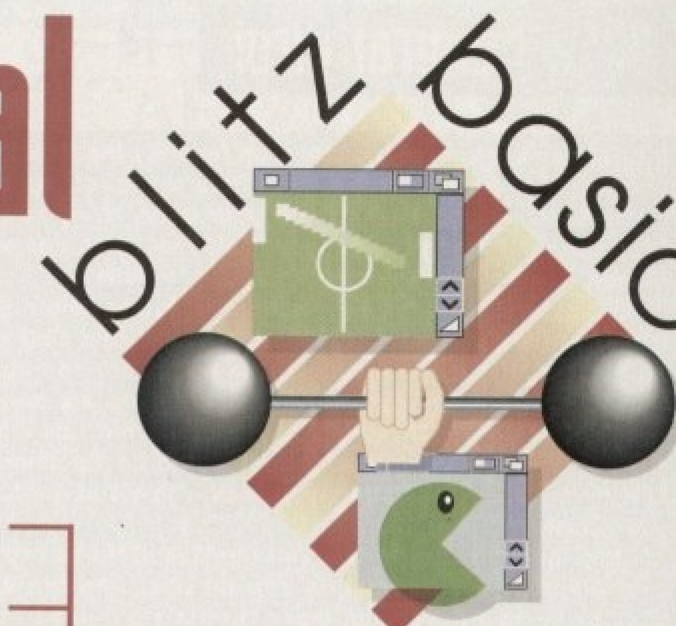
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The final word



Michael Milne bows out with his last tutorial on Blitz Basic

Part 6

Due to the generous mood I'm in I'll start this last tutorial with a quick tip for detecting GadTool gadgethits. It can be done by checking for 'GadgetReleased' from WaitEvent.

As this is the last tutorial I'm going to tie things up nicely by discussing some of the more optional topics that we can bolt on to your existing knowledge.

Commodities!

(ROM 2.0+ Only!) (BUM 7 update required!)

For those of you who have ROM 2.0+ you will probably love to get your hands on some commodity options for your programs. With the release of BUM 7 this is possible, and for those of you who may consider this slightly daunting, I will explain it simply and without fuss!

Commodities are a brilliant concept whereby they can all be controlled by one program 'Exchange.' Therefore, the whole basis of commodity programming is basically sending and receiving messages from Exchange, a bit like keeping in touch. Unfortunately this has proven very difficult to master, even with the docs, but now we have a simple set of commands which tames the whole process.

The basic concept for making your Blitz program a commodity is as follows: Firstly, initialise it as a commodity so that Exchange knows you are there. In your main loop, after the event command, check for a commodity event and if there is one then act upon it and continue as normal.

To initialise a commodity you need a name and title for it plus a short description – these are used by Exchange in its info box. The following is an example for adding a program:

```
success=MakeCommodity("BlitzAdd","My
Adder","Small adder by Michael Milne")
```

Here you can see that the name goes first, followed by the title and then a short description. If it is successful then 'success' is returned as True.

Following this is the main loop:

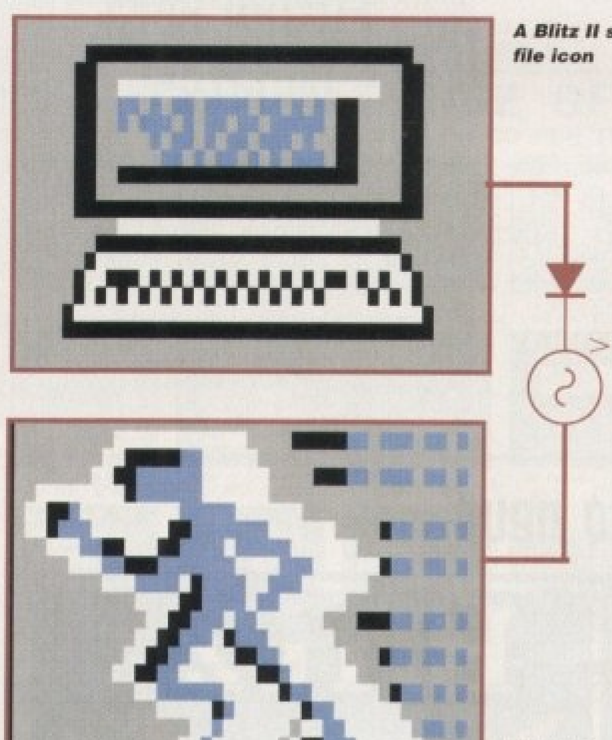
```
.......initialisation........
Repeat
        ev.l=Event
        cv.l=CommodityEvent
        If cv Then gosub do_commodity_msg
        VWait
Forever
.......rest of program.......
```

Please note that CommodityEvent must follow WaitEvent or Event otherwise nothing will happen! As you can see, if a commodity event is detected it will be passed into cv. Our program then checks for this and jumps to a sub-routine if needed.

So what do we do then? Well, we need to check what message Exchange is actually saying to us – this is how we do it:

```
do_commodity_event:
        em.l=ExchangeMessage
                Select em
        Case CxAppear
                Gosub show_window
        Case CxDisAppear
                Gosub hide_window
        Case CxEnable
                SetStatus On
        Case CxDisable
                SetStatus Off
        Case CxKill
                End
        End Select
        Return
```

As you can see, we need another variable to hold the specific message id number. We then select which message it is by using predetermined variables set with the 'Cx' commands which return the id number ➤



A Blitz II source file icon

A Blitz II executable file icon!

DiskMag update!

If you are not already subscribing to my diskmag then perhaps you should consider it. As one of the only sources of help in the UK for Blitz programming I think it's worth anybody's while to get as much help as possible!

Also for those of you who have already received the free first issue and are perhaps slightly dissappointed by it, you might like to know that number two is out and number three is on the way. Through it people will learn how to do almost anything from standard OS calls to complete in-line assembler. Who knows, by the end of it some of you could be programming your own commands!! One last note about the original issue one. The interface was naff I know, and it has now been changed so that it does look readable on a normal TV, plus it is much smarter!

So for those who feel that any help is better than none at all can contact me at my new address: 27 Bruce Road, Woodley, Reading, Berkshire RG5 3DY, or you can mail me on the internet at: mike@bluridge.daemon.co.uk

If you want to see the first issue free of charge send a SSA Envelope with a blank disk to the above address.

Blitz software!

At the moment there is not much awareness of Blitz programmed software in commercial and PD circles. I think it would be a good idea to make a list which is accessable to all users detailing all available Blitz-related software at the moment.

So send me any information about any software you have seen or programmed, including the following details: Type of software (i.e. game, application, tool etc..); who it was by and where you can get it; system requirements plus requirements for optimum performance and a short description of what it does!

Hopefully by doing this we can get together a comprehensive list which is accessible to anyone at anytime!!

Blitz general info!

It has been brought to my attention recently that there is often confusion on how to update your Blitz when you get an issue of Blitz User Magazine through your door. Many of you find that after installing it you get id clashes with certain commands which render them completely unusable.

My advice to you on this is to completely delete your old BlitzLibs files as well as the Blitz program, the TED program and Deflibs file. Then install all the new files. You should do this because all the new and old commands are supplied in each update of BUM, so if you leave any old libs from, say, BUM 6 when installing BUM 7 there could be the same lib in a DIR twice under two different names – this will confuse Blitz when it tries to load it.

After that you should also run the MakeDefLibs program so that all the new commands can be used, as the supplied DefLibs file is always a cut-down version for those people who only have 512k ram – which I think is probably no-one these days!

If you have any problems, even after following these simple rules, then write to me at the address given on the previous page and I will do my best to find the source of the problem and thereby find a solution.

Where will the future take us!

Well I don't know. but if you would like to see more of this column in Amiga Computing then it is up to you to make your voice heard. As it stands this article is currently the last one planned, but if you would like me to continue then please write in to <I>Amiga Computing<D>.

Please include the various topics you would like covered, plus any comments on how you thought this tutorial went! If your response is good enough then you might be treated by an all new tutorial. If not then I wish you luck with all your programming.

of that particular command.

- CxAppear/CxDisAppear tell us that Exchange wants us to either display our user window (CxAppear) or hide the window (CxDisAppear).

- CxEnable/CxDisable are used for the Exchange interface and also to let us know whether or not to run our program (CxEnable) or put it on standby

- (CxDisable). CxStatus tells Exchange what state we are in as determined by CxEnable/CxDisable. The default for any program just started is to be enabled..

- CxKill tells us to quit!

We can also set up a HotKey combination which Exchange will report to us if it is used. To set it up we use the command 'SetHotKey'. So to set up a hotkey to automatically bring up our window using the right Alt key plus '1' we would do the following:

```
success=SetHotKey(1,"ralt 1")
```

The first parameter is the hotkey number and should start from 1. The second parameter is the key combination. Note that we can define special function keys using the following abbreviations:

Left Amiga = lamiga
Right Amiga = ramiga
Left Alt = lalt
Right Alt = ralt
Control = ctrl
Left Shift = lshift
Right Shift = rshift
Del = del
Help = help
Escape = esc

Using these in combination with normal keys can set up a unique hotkey! The HotKey number is relevant when you need to know which hotkey was hit. You do this with the following command which must follow the 'CommodityEvent' command in your program:

```
hk.l=HotKeyHit
```

If no hotkey was hit then False is returned, otherwise the hotkey number is returned.

Future Blitz updates!

At the moment there is very little known about the next lot of libs to hit Blitz. Hopefully though, the following libs should be with us soon: 3D lib; Mapping Lib; SpaceFX Lib.

If anyone knows of anything they would like to see supported in Blitz you can either write to me or to Acid Software.

Multiple joystick testing

(BUM 7 update required!)

Just in case you are having a major headache sifting through the countless new commands in BUM 7, it may interest you to know that there are now commands that enable you to test up to four joysticks in play at once – should there be a four-player adapter being used. These commands are:

```
jf.b=JFire(joy#)
jh.b=JHoriz(joy#)
jv.b=JVert(joy#)
```

JFire returns just 0 for no fire or -1 for fire pressed. JHoriz and JVert return either 1, 0 or -1 depending on whether they moved left/up, no movement or right/down in that order. 'joy#' is the number of the joystick from 1 to 4.

From old to new!

Blitz basic is by far the most powerful Amiga basic but it's just about to get even better! Simon and the crew at Acid Software are currently developing the next generation of Blitz.

To those of you who have received BUM#7 you will know that he mentioned a Blitz 3. Well, I have been informed that although it is still Blitz, because of the change it has gone through in this latest update Simon has decided to rename it.

However, don't despair at the thought of missing it because you didn't know its name. It looks as if all current registered Blitz Users will all be informed in BUM with, hopefully, a nice little discount!

As per normal the new language will be distributed by our normal distributors Guildhall Leisure Services. Please don't keep calling them regarding the next BUM or the new language as they are as often in the dark, as we are, until a couple of weeks before the event!



That's all folks!

I hope these tutorials have been intuitive and informative enough for you. If there is anything you need help with then don't throw your computer out of the window. Write down your problem and post it to me. Ninety per cent of the time it is probably something that can easily be solved.

Thankyou and goodbye, Michael Milne.

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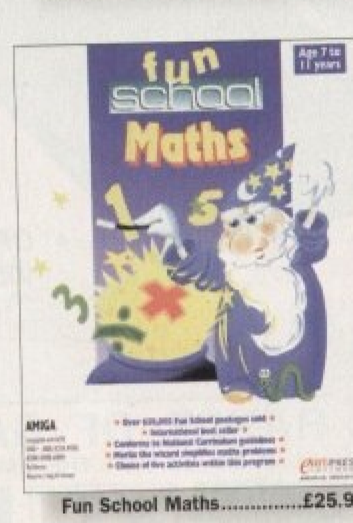
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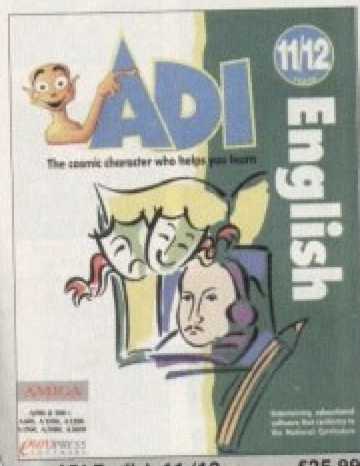
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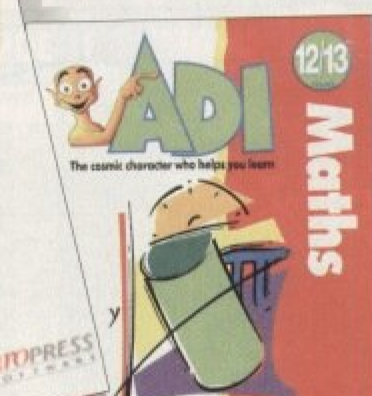
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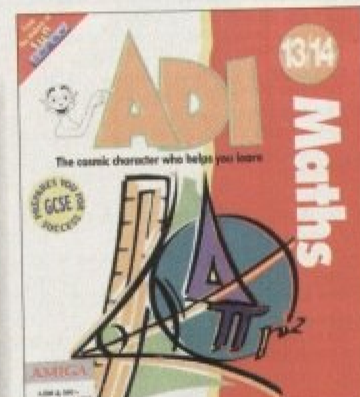
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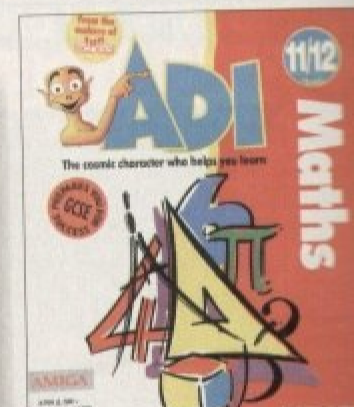
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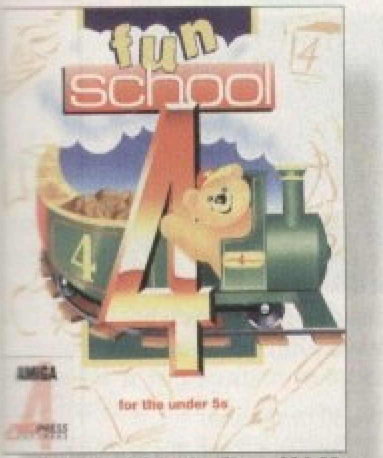


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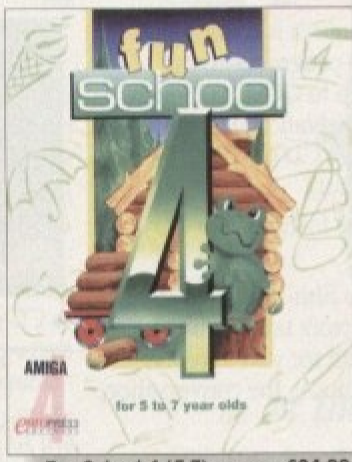


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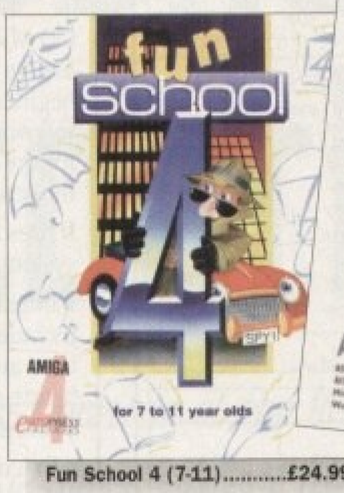
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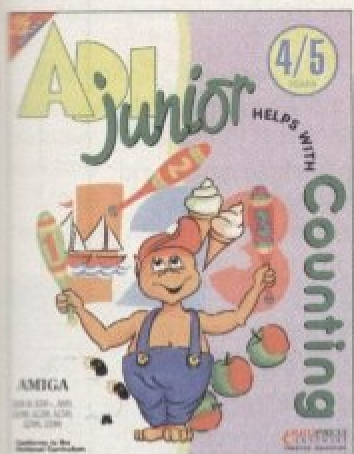
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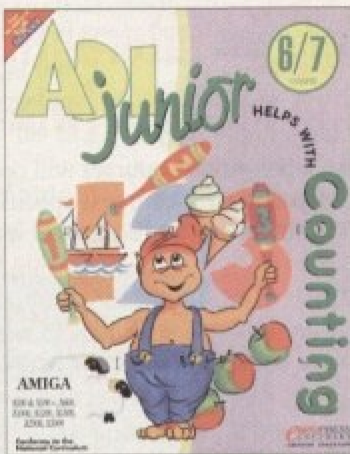
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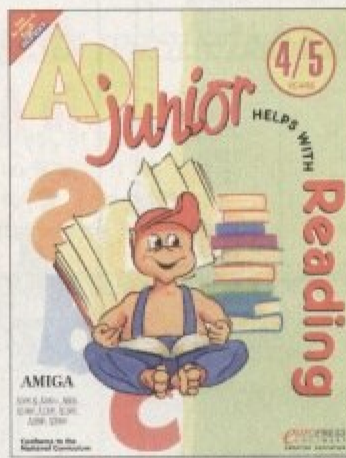
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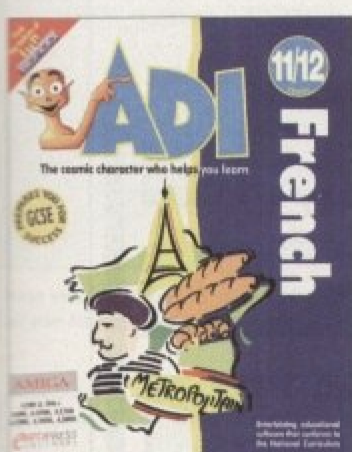
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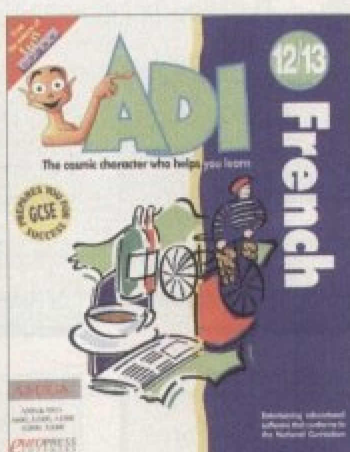
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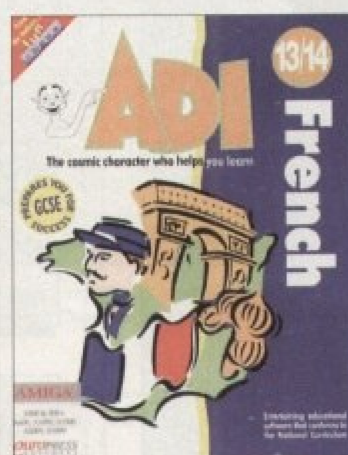
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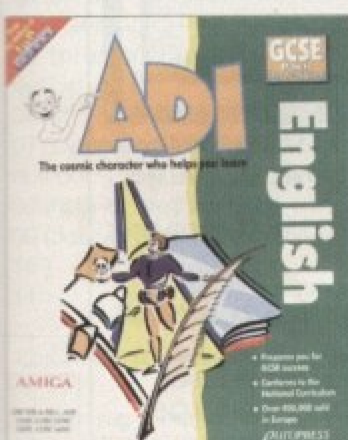
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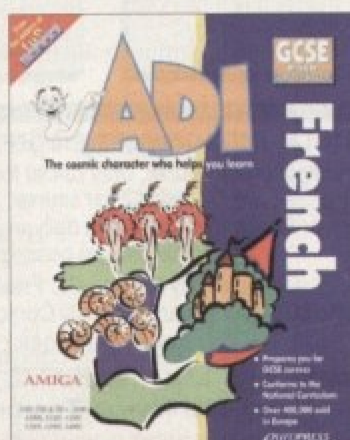
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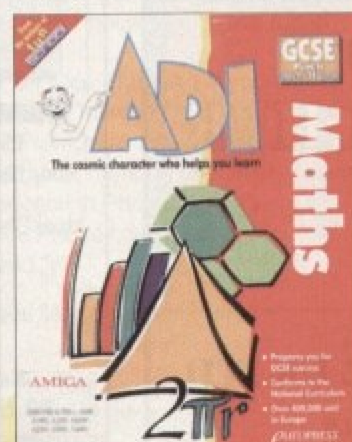
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The Personal touch



Part 4

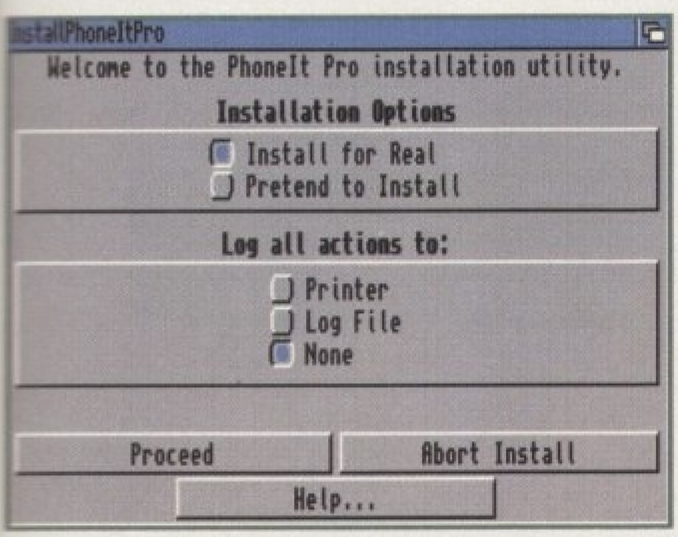
In the last episode of the Installer language, Steve White explains variables and checking for registration numbers

Well, as this is the last instalment of my Installer language tutorial I thought I would finish off the explanation on variables and give you an example of how you can check for registration numbers. Of course, I will be giving you as much of the command syntax as I can in the short space left.

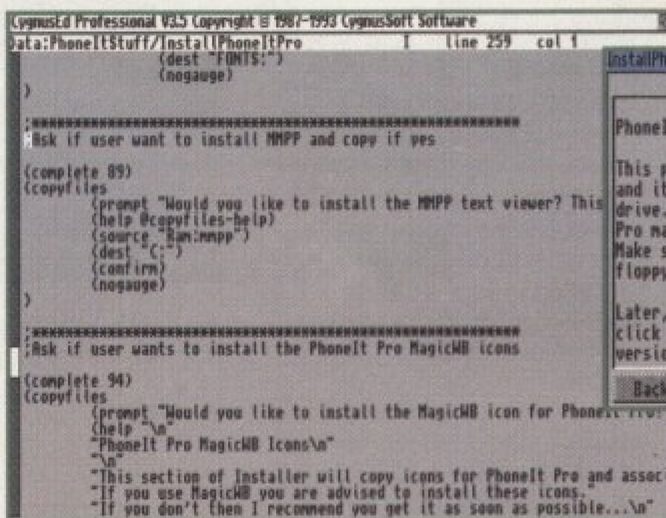
Below is an example of how you can check for a registration number within your Installer scripts. Although the number is given, it is a good illustration of the flexibility of Installer. The example was taken from a program that I wrote, hence the reference to PhoneIt and PhoneIt Pro.

The first section, lines 01 to 11 ask the user to enter a string as their registration number. This could alternatively be a number.

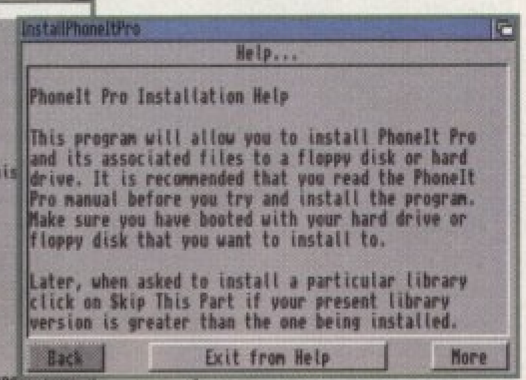
Lines 12 to 32 check the variable reg (your entered string) against the registration number CharlieCat and if correct, asks the user to save it to the PhoneIt.defaults file in S: The rest of the file is executed afterwards. In lines 33 to 43 the program responds to an incorrect number, informs the user and then continues with the rest of the program.



Now you should be able to install your programs with ease using all you have learnt to write advanced and user-friendly scripts



Remember, Installer is available in the C: directory of all Amiga Computing shareware CoverDisks



To help you write Installer scripts quickly and easily, get yourself a copy of Cygnus Ed (CED)

```
01 ;Ask user to enter registration number

02 (complete 97)
03 (set reg
04 (askstring
05 (prompt "Please enter your registration num
ber...\n"
06 "\n"
07 "Delete the text and enter your 10 digit registration
number.")
08 (help @askstring-help)
09 (default "Enter Registration number here...")
10 )
11 )

12 ;Check registration number and respond on result

13 (if (= reg "CharlieCat")
14 (textfile
15        (prompt "Shall I save your registration to the
S:PhoneIt.defaults file?\n"
16        "\n"
17        "This will save you having to enter your reg-
istration number when PhoneIt Pro is first run.\n"
18        "\n"
19        "Click on Skip This Part if you do not want
to save the registration number.")
20        (help "From here you will be able to save
down your registration number effectively bypassing
the registration section in PhoneIt Pro\n")
21        (dest "S:Phoneit.defaults")
22        (append "\n"
23               "\n"
24               "485\n"
25               "0\n"
26               reg
27               "\nS:\n"
28               "\n"
29               "S:\n"
30               "YES")
31        (confirm)
32 )
33        (message "You have entered an incorrect
registration number.\n"
34               "\n"
35               "You will need to enter the
correct number when you run the PhoneIt
36 Pro program.\n"
37               "\n"
38               "Click on Proceed to continue..."
39        (help "You have failed to enter the correct
registration number and
40        therefore will be required to enter the
correct one when you run the PhoneIt Pro program.")
41        (confirm)
42 )
43 )
```

Under command

What follows is a description of each command available for each function and a few others thrown in for good measure. Each function is labelled and the appropriate commands given.

Create a new directory
Creates a new directory
(makedir <name>
<parameters>
)

Parameters
prompt – tells the user what's going to happen
help – text of help message
infos – create an icon for directory
confirm – if this option is present the user will be prompted, if not the directory will be created silently
safe – make directory even if in Pretend mode

Copy files
Copies one or more files from the install disk to a target directory. Each file will be displayed with a checkmark next to the name, indicating if the file should be copied or not.

(copyfiles
<parameters>
)

Parameters
prompt – as above
help – as above
source – name of source directory or file
dest – name of destination directory which is created if it doesn't exist
newname – if copying one file only, and the file is to be renamed, this is the new name
choices – a list of files/directories to be copied (optional)
all – all files/directories in the source directory should be copied
pattern – indicates that files/directories from the source directory matching a pattern should be copied
files – only copies files. By default, any sub-directories will be copied
infos – as above
fonts – switch to not display ".font" files, yet still copy any that match a directory that's being copied
confirm – see above
safe – see above

Copy a library
Copies a library into LIBS: while version checking
(copylib
<parameters>
)

Parameters
prompt – as above
help – as above
source – name of source directory or file
dest – name of destination directory which is created if it doesn't exist
newname – if copying one file only, and the file is to be renamed, this is the new name
confirm – see above
safe – see above

Edit User-Startup
Edit the S:User-Startup file and add commands under appname
(startup <appname>
<parameters>
)

Parameters
prompt – as above
command – used to declare an AmigaDOS command line to be executed at system startup

Change ToolTypes
Allows modification of an icons's ToolTypes
(tooltype
<parameters>
)

Parameters
prompt – as above
help – as above
dest – the icon to be modified
usettooltype – the tooltype name and value string
setdefaulttool – default tool for a project
setstack – set size of stack
noposition – reset to NOICONPOSITION
swapcolors – swap first two planes of icon's image if OS rev less than v36
confirm – see above
safe – see above

Create text file
Creates a text file from other text files or strings
(textfile
<parameters>
)

Parameters
prompt – as above
help – as above
dest – the name of the text file to be created
append – a string to be appended to the new text file
include – a text file to be appended to the new text file
confirm – see above
safe – see above

Run AmigaDOS commands
Allows you to execute AmigaDOS commands from the script
(execute <arguments>
<parameters>
)

Parameters
prompt – as above
help – as above
confirm – see above
safe – see above

Run programmes
Executes a complied program
(run <arguments>
<parameters>
)

Parameters
prompt – as above
help – as above
confirm – see above
safe – see above

Create Assigns
Make Assigns to paths
(makeassign <assign> [<path>]
<parameters>
)

Parameters
safe – see above
Notes – Assigns must not have a colon; i.e. ENV not ENV:

Rename files
Renames a file, directory or a disk name
(rename <oldname> <newname>
<parameters>
)

Parameters
help – as above
confirm – see above
disk – switch rename to relabel a disk
safe – see above

Delete file
Deletes selected files
(delete <file>
<parameters>
)

Parameters
prompt – as above
help – as above
confirm – see above
safe – see above

End script
Causes termination of a Installer script
(exit <string> <string>
(quiet))

Completion
Informs the user how complete the installation procedure is based on a percentage %
(complete <number>)

Show message
This statement displays a message to the user in a window, along with Proceed, Abort and optional help buttons. Messages are not printed when running at user level 0 (novice)
(message <string> <string>
<parameters>
)

Parameters
help – as above (optional)

Long operations
Working will add the strings given to form a message which will appear below a standard line that reads "Working on Installation". Useful if you are doing a long operation
(working <string> <string>)

Get directories
Asks the users for a directory name with a scrolling list requester. The user can either create a directory or specify an existing one.
(askdir
<parameters>
)

Parameters
prompt – as above
help – as above
default – default name of directory to be selected
newpath – allows non-existent paths to be supplied as the default drawer
disk – show drive list first

Get files
Asks the user for a file name with a scrolling list requester
(askfile
<parameters>
)

Parameters
prompt – as above
help – as above
default – default name of file to be selected
newpath – allows non-existent paths to be supplied as the default drawer
disk – show drive list first

Get strings
Prompts the user to enter a text string
(askstring <parameters>
)

Parameters
prompt – as above
help – as above
default – the default text string

There's more

Unfortunately, I haven't time to explain variables fully but you should have enough by now to write some pretty advanced Installer scripts. However, if you want to see more on this subject you'll have to write to the editor.

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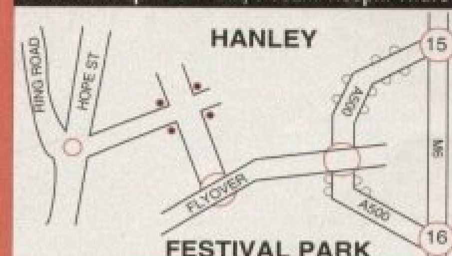
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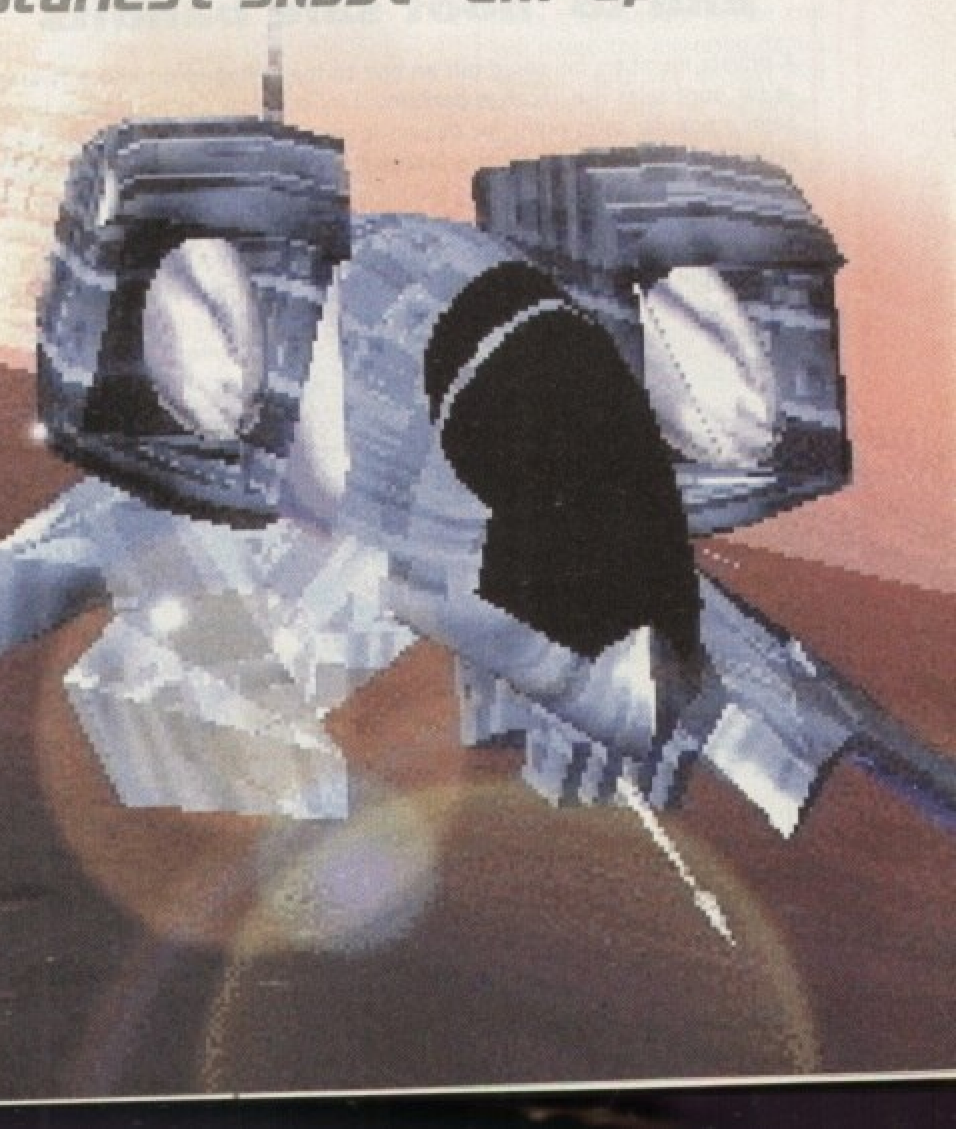
SYSTEM

Your essential guide to the world of Amiga gaming

This month the spotlight falls upon

A new breed...

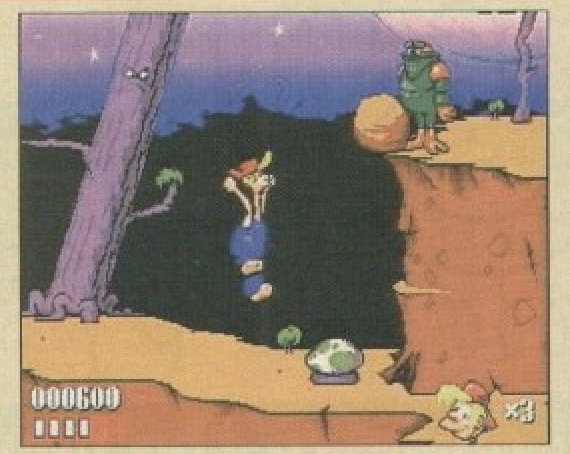
Team 17 lead the alien assault once more as we welcome back the Amiga's scariest shoot-'em-up



SYSTEM ANALYSIS

Going for Gold!

Derby-based software house, Core Design, has been bought out by CentreGold plc. The company was founded by Managing Director, Jeremy Smith, back in 1988 and started life supplying products to publishers such as Microprose and Activision. From 1990 it published its own products for the Amiga and Atari ST, later expanding to include IBM PC and Sega platforms. On commenting on the acquisition, Smith said: "With the explosion of the leisure entertainment industry imminent, this exciting move for Core Design will ensure that the company will be in a position to fulfil its expansion plans and be associated with probably the most respected name in the European computer games market."





Over the years Core Design has become renowned for high quality, original games

system online



Christmas has been and gone and we hope you got the games you wanted. Tina Hackett welcomes in the New Year and takes a look at what 1995 has to offer you on the games front.

Budget bonanza



Psygnosis' budget titles include Microcosm

Still strapped for cash after Christmas? Fear not, as there are plenty of games houses at the moment doing the decent thing and bringing out a selection of budgets for your delectation.

Kixx XL is bringing out a selection of Millennium's finest CD32 games at £9.99. These are James Pond 2, Morph, Brutal Football and Global Effect. Also from Kixx is its Limited Edition Classic Collections. The LucasArts Collection, usually worth £75, comprises of Monkey Island, Indiana Jones, Loom, Maniac Mansion and Zak McKracken. The Delphine Collection, normally worth £96, houses Flashback, Another World, Cruise for a Corpse, Future Wars and Operation Stealth. Both packs are a snip at only £29.99.

Psygnosis is planning a budget onslaught with dozens of hit titles intended. Prices range from between £4.99 and £9.99 and titles include Lemmings, Microcosm, Hired Guns, Second Samurai and Shadow of the Beast.

Core Design has some real bargains in the offing at the moment with its compilations and budgets. One of these bundles contains Blob, Wonderdog, Blastar and Cyberpunks and at £19.99 this works out at only a fiver a game – value or what! Also from Core is the Chuck Rock 1 and 2 CD32 pack and the double dose of Bubba 'n' Stix and Premier. Both packs are priced £19.99.

Virgin is also feeling generous this year with its £34.99 compilation containing Cannon Fodder, The Settlers, T2: The Arcade Game and The Chaos Engine. So now there's no excuse, even if Christmas has left you skint!



Classic war'-em-up Cannon Fodder in a bargain pack from Virgin

End to 'boot sale bandits

A private members bill could put an end to the selling of pirated software at car boot sales if it receives parliamentary support. Car boot sales have been a popular sales point for dealers in pirated software of late, and it's estimated that piracy costs the industry between £300 million and £500 million a year.

The bill will restrict exactly what gets sold at car boot sales and will be enforced by the organisers who will need a licence from the local authorities. To get the licence they will have to convince police that no illegal goods will be sold – if this is broken they would run the risk of losing the licence.

If passed, the bill will come as a welcome step forward in stopping the software piracy that is a constant threat to the industry.

Oo-err missus!

Slayer, Deicide, Ozzy Osbourne, Evil Eric. The connection? Satanism in records. Yes, Evil Eric – you know, the most evil cat in the universe? It may all be starting to sound slightly dodgy but it is in fact a new release from Team 17 that provides a double entendre that even the Carry On team would be proud of.

Called Pussies Galore, it is based around a cat that's released a satanic record which has put all the little kittens under his spell. As the streetwise alley cat, Boris, you must rescue them.

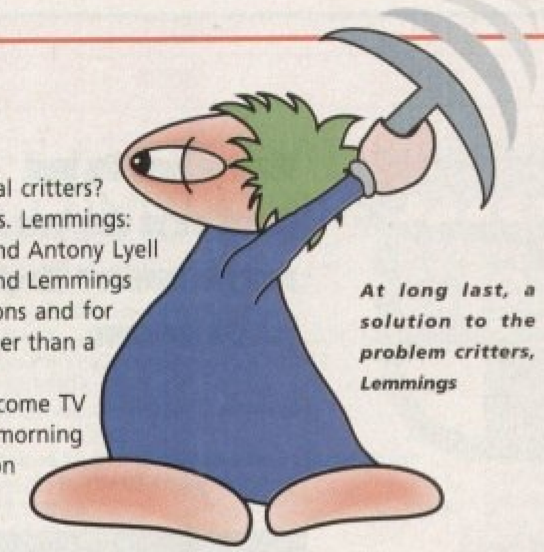
Media Manager, Alan Bunker, describes the project: "Platform games of recent have lacked graphical originality and innovative gameplay. With Pussies Galore, we hope to inject a huge amount of humour and masses of funfilled platforming action."

Look forward to Pussies Galore on the A1200 and CD32 soon.



Cat themed platformer, Pussies Galore promises "funfilled platforming action"

Simple solution



At long last, a solution to the problem critters, Lemmings

Still stuck on the Lemmings games? Nightmares consist of small green suicidal critters? Don't fear as help is at hand in the form of a cheat guide from Kuma Books. Lemmings: The Solutions for PC and Amiga Versions has been written by Steven Croft and Antony Lyell and covers all the single-player levels of Lemmings, Oh no! more Lemmings and Lemmings 2 – The Tribes. By parting with £9.95 you get 256 pages of Lemmings solutions and for those who've been tearing their hair out with the games, it comes a lot cheaper than a toupee! Contact Kuma Books on 0734 844335.

Also on the subject of Lemmings is the news that the characters could become TV stars in their own cartoon. A deal with CBS means they would run a Saturday morning Lemmings cartoon from August next year, with European appearances soon after. And you thought there was an escape....!

Kickin' in Europe

Kick Off 3 from Anco has been rehauled, revamped and redesigned to bring Kick Off 3, European Edition. This new version will support a one and two-button joystick as well as utilising all the buttons on a CD32 controller.

Game-wise there will be a more managerial aspect to it and things such as animations will be improved. 1500 sprites are used with linesmen, referees, trainers and the like. Digitised crowd samples and chants will create the atmosphere.

The Amiga 500/600 version costs a mere £24.99 – £29.99 for the A1200 – rising a tenner for the CD32 version priced at £34.99. For the real bargain though, the first 10,000 copies come free with the FA Carling Premiership Pocket Annual 94/95 worth £3.99.





New features will be added to Kick Off 3, European Challenge, as well as improvements to the original

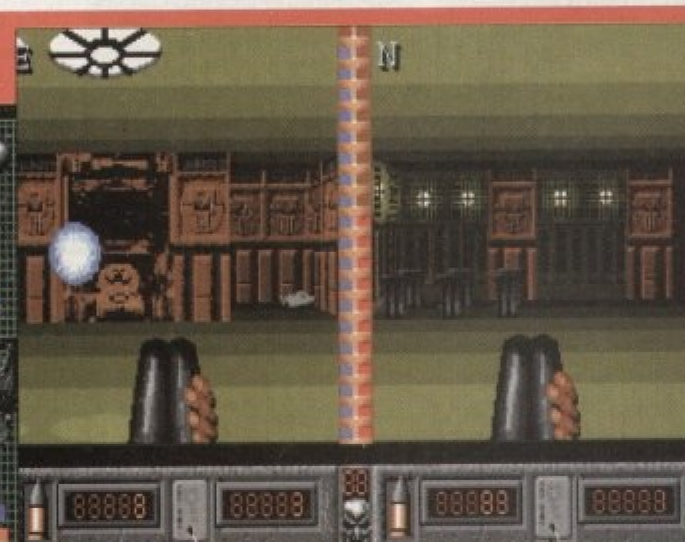
Not all Doom and Gloom

You thought the likes of Doom and Wolfenstein could not be done on the Amiga? Well, apparently it can thanks to Alternative Software's new game, Death Mask. Walking around a complex maze of corridors, the idea behind it is to track down the aliens and blast them with one of the many weapons at your disposal.

A two-player mode also allows you to play with or against another player, having to hunt the other down in the many corridors and rooms. This is available for the Amiga and a special version will be available for the CD32.

A Doom and Wolfenstein-type of game on the Amiga – at last!





In Brief

Big 'maxx

The Cybermaxx Virtual Reality headset hits the shops this Winter. ZCL will distribute the sets through its Calculus stores and possibly through retailers Game and HMV. Selling for a whopping £499, it includes four titles and is designed primarily for the PC. Forty five 'maxx-specific games are planned for release before January 1995.

Manga mad!

Two new titles are being released from Manga Video. They are Genocyber: A New Lifeform and AD Police 1: Voomer Madness. Manga is also continuing its popular series with the concluding part of Cyber City OEDO 808, File 3: Blood Lust and part nine of The Guyver.

Like a Virgin

The bigger the better some might say, especially Virgin, as its Oxford Street Megastore is about to become one of the biggest entertainment centres in the world. The store will more than double in size and will house the increased games section which will be split into sections to cater for the different types of customers. It also boasts to have "the finest selection of games in the UK"!

System Selections

Want to know the best games we've seen over the past few months? We give you the low-down....

Putty Squad



The graphics are beautiful and the animation is excellent, especially on the main character.

The control method, considering just what Putty can do, is very easy to use and becomes second nature to you after only a couple of goes. It is extremely addictive and I put hand on heart and recommend it to everyone. Die-hard platform freaks and Putty fans are going to love it to death.

Dreamweb



Imagine an interactive version of Blade Runner directed by Quentin Tarrantino and you might just come close to what it's like to sit, watch and play Dreamweb. This title oozes class out of every digital pore and it almost seems to good to be true. Dreamweb literally roars across your monitor screen and growls at you like a vicious beast from the pits of hell.

Gaurdian CD32

This game is a rarity in that it actually looks and sounds like 32-bit technology. What's more, the attraction is more than skin deep thanks to playability that must have taken a lot of care and attention on the developer's part. If you're out for plain old-fashioned action, buy Guardian and invigorate your spare time. This one shouldn't be missed.

Zeewolf



The game plays like a dream. Once you've mastered the controls you're away in a shoot-'em-up world packed full of action and excitement. Binary Asylum can slap itself on the back because Zeewolf is a tremendous success. It's a game that doesn't rely on heavy advertising or publicity to sell it, but simply lets the gameplay do the talking. I have nothing but praise for Binary Asylum's debut and it's one of the gaming highlights of 1994.

Ruff'n' Tumble



Ruff 'n' Tumble is one of the best platformers I've played in ages. Wunderkind has done an amazing job and seems to have got every single element of the game just right. The graphics are superb, the sound is good, the gameplay is amazing and it has an uncanny level of addiction that'll keep you playing it again and again. Ruff 'n' Tumble is, quite simply, the cutesy platformer of the year.

The scores on the doors

Come on regular readers, you must know how it works by now. New readers, welcome to the most exciting part of the magazine, hold on to your hats...

I'm sure many of you are now familiar with our new scoring system, but for those reading *Amiga Computing* for the first time and those who might have forgotten exactly how it works, here is our guide to the System scoring, err system.

In our opinion, review scores have lost their context as a percentage; some products receiving scores which were only a few percentage short of being the "perfect" game, when in truth they were only marginally above average.

OK, so the scores might seem unnaturally low at first, but that's only because other scoring systems tend to be on the high side and perhaps not as comprehensive or honest as they could be.

In the long run you'll receive a more concise and reader-orientated review that's geared towards the consumer.

0-20 This is given to the lowest of the low

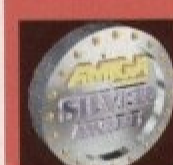
21-30 An all-round poor game that may have a single saving grace

31-40 Just below the average, perhaps let down by a few indiscretions.

41-55 Games of this score are roughly average with 50 being a perfectly average score.

56-66 This is an above average game and is worth buying. For this reason it would be awarded the BRONZE award.





67-77 A game of high quality that you as a reviewer would have no reservation in recommending. Anything of this ilk would be awarded the SILVER award.

78-89 A brilliant title. Definitely worth buying and almost the definitive of its kind. This type of game would receive the GOLD award.



90-100 The best in its genre. This benchmark title receives the PLATINUM title.



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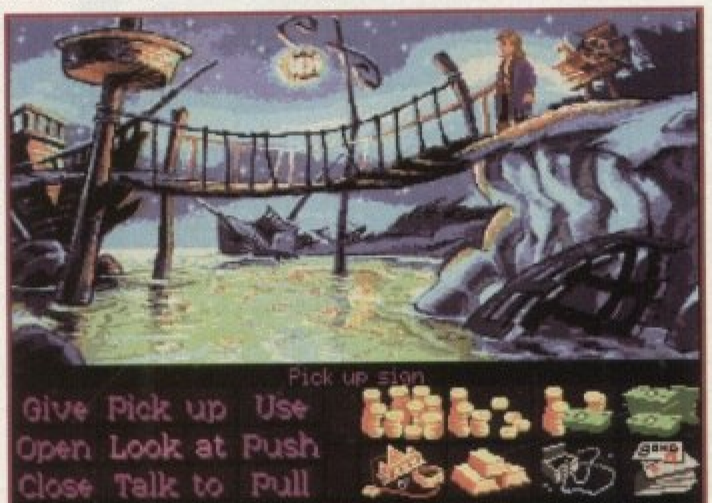


This classic adventure game from a couple of years ago has now been released on the Kixx XL budget label. Troubled gamers can use this guide to complete the wonders of the second Monkey Island adventure

Part I

You start off the adventure with loads of money in your pocket, but you won't keep it for long as a chap called Largo will come and take it all away. Walk to the right and you'll find a map of the island. Move the cursor around to check which places you've got access to. Walk to the boathouse and talk to Captain Dread. He'll tell you that you've got to get rid of Largo before you can leave the island.

Go to the swamp and find the coffin. Use it to row to the right until you have reached the shack. Talk to Mojo, the voodoo lady, and ask her about the voodoo doll. You'll receive a voodoo shopping list from her from which you'll need four items, and the first must be obtained from the dead.



Guybrush starts off with his pockets loaded down with cash, but it will soon disappear courtesy of local thug, Largo LaGrande



Talk to the Woodsmith and buy some wood polish off him. You can go and see the pirate with the peg-leg and get some more money

Go to the Woodtick and once at the toll bridge, pick up the sign and you'll obtain a shovel. Walk to the cemetery and have a look at the tombstones. Locate the grave of Largo's ancestor and use the shovel to dig up the grave and pick up the bone.

Go to Wally's place (the cartographer) and pick up a piece of paper. Walk to the hatch (bar) and talk to the bartender. Largo will appear and spit something on the wall. Wait for him to leave and then use the piece of paper to get the spit off the wall. You now have your second item.

Walk to window (just beside the hatch) and you'll be able to enter the kitchen. Walk to table and pick up the knife. Go to the inn and talk to the innkeeper.

Use the knife on the rope to release the alligator. The innkeeper will run after the alligator leaving you free to enter Largo's room. Walk up to the plastic head and pick up the toupee. You've now managed to collect the third item.

To get the final item, you must go to the laundry shop. Walk to the left and pick up the bucket. Head to the swamp and use the bucket on the swamp to get a bucket of mud.

Go back to Largo's room. Close the door behind you and put the bucket of mud on top of the door. Wait for Largo to come in and watch him get dirty. Now follow him to the laundry and listen to the conversation. Go back to Largo's room once more, close the door and get the laundry ticket from behind it.

Head back to the laundry and give the ticket to the old man to get Largo's clothing. You now have all four items, so go back to the swamp. Talk to Mojo and give her the four items. She'll give you a voodoo doll and some pins in return.

Yet again go to Largo's room, but this time use the pins on the voodoo doll. This will get Largo off the island.

Find and talk to Captain Dread. He will ask you to get something for him. Walk to Wally's place, talk to him, but make sure he has nothing more to tell you. Wait for him to put down his monocle and then pick it up. Give the monocle to Captain Dread and he will then ask you to get 20 pieces of eight.

CLEANING

Walk to the laundry to talk to the pirates. Agree to buy them some wood polish. Walk to the woodsmiths. Talk to him and buy the wood polish. Walk back to laundry and use the polish on the pirate's peg leg. You'll get a piece of eight, but that won't give you sufficient money to pay the Captain.

Head to the beach and pick up the stick. Return to the swamp and look around Mojo's place. Pick up the string and then go to the inn. Look at the bowl and pick up the cheese squiggles.

Go to the laundry. Open the box and use the stick on it. Now use the cheese squiggles on the box, use the string on the stick and wait for the rat to eat the cheese. Pull the string to catch the rat, then open the box and get the rat.

Go to the kitchen (enter it from the window) and put the rat in the pot. Walk to the bar and talk to the bartender. Ask him about the stew and he'll find the rat in the soup. As a result the cook is fired and you get yourself a new job. The bartender will give you 420 pieces of eight. Go and talk to the Captain and he'll take you wherever you want to go.

Island 2



Part II

There are three islands you can go to: Scabb, Booty and Phatt. Outside the boat, pick up the parrot food and read the book about Big Whoops to find out about the map pieces.

Go to Booty Isle and enter the antique shop. Buy the well polished saw (near the door). Head back to Scabb Isle and go to the laundry once more. Use the well polished saw on the peg leg. Walk to the Woodsmiths. He'll be out on emergency service. Pick up the hammer and the nails.

Go back to Booty Isle and enter Stan's coffin shop. Talk to him and ask him to show you the coffin. When he is inside it, close the coffin – he'll give you a hankie. Close the coffin again



The barkeeper will keep you supplied with loads of grog but you can also try asking him for a job later on in the game

and use the hammer with the nails to trap Stan inside. Pick up the crypt key and go back to Scabb Isle.

Go to the Cemetery and use the crypt key to open the crypt. Enter and you'll find many coffins, each with a quote on them. You'll need to find out which one is Rapp's coffin before you can open them.

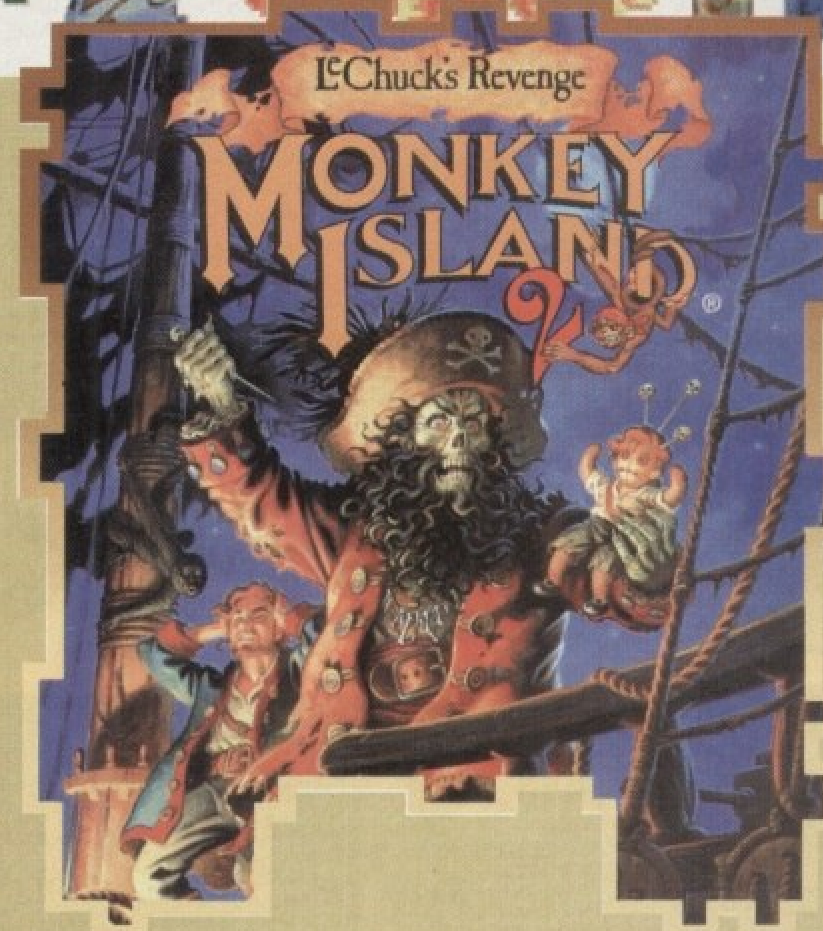
Go to Phatt's Isle, but be warned, once you reach the isle you'll be captured. While you're in jail, open the mattress and pick up the stick. Use it on the bone.

Give the bone to the dog and get the key. Open the door and pick up the envelopes. One of them contains your personal items and the other contains a banana and an organ.

Walk to the library. Borrow a few books to get a temporary library card from the librarian. Borrow the book on voodoo called "Receipts: The joy of hex". Head off to the mansion. Open the gate and enter through the front door. Talk to the guard and find a reason to get him to go away. Go upstairs and swap one of your books with the book from the governor. The book contains all the famous quotes from many pirates.

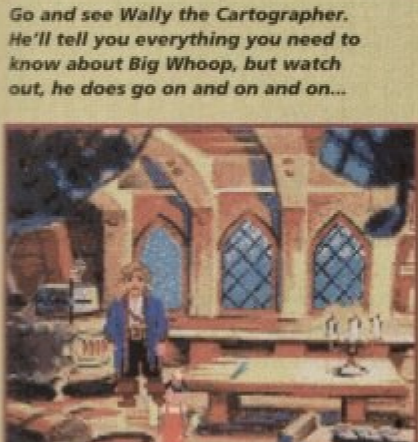
Go back to the cemetery on Scabb Island and look at the coffins. Open the coffin of Rapp Scallion, look inside and pick up some ash. Go back to Mojo's place and look at the jars. One of them is the Ash-to-life potion. Talk to Mojo. Give her the ash of Rapp Scallion and get the Ash-to-life potion from her. Use the book of voodoo receipts when needed.

Return to the cemetery and use the potion on Rapp's ash. Talk to Rapp, agree to check up on his hut and get a ➤

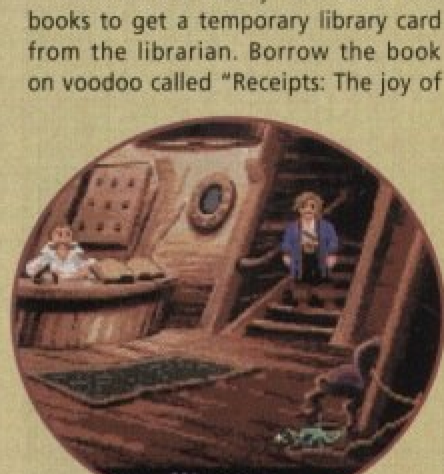




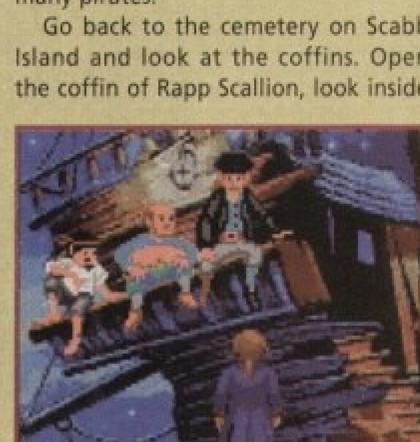
Go and see Wally the Cartographer. He'll tell you everything you need to know about Big Whoop, but watch out, he does go on and on and on...



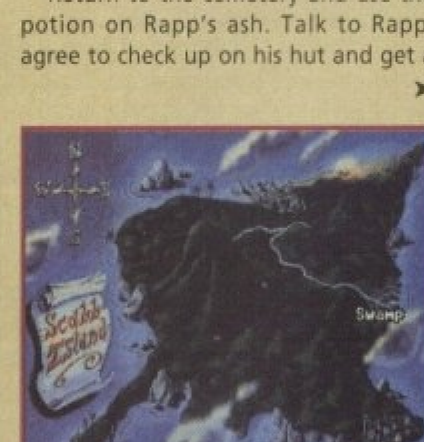
Sneak into the kitchen through the back window and you'll be able to tamper with the stew that's currently cooking away on the stove



The Innkeeper won't let you into Largo's room, but find a knife and you can distract him by releasing his pet alligator



Talk to the three pirates and although they go on for ages, they will eventually sort you out with a job to do



Whenever you leave Woodtick, you are presented with a map that details all the various places on Scabb Island that you can visit

key from him. Go to the beach and use the key to open the door to the weenie hut. Use the knob to turn off the gas.

Go and talk to Rapp once again and he'll give you a map piece. Go to the antique shop on Booty Isle. The map piece is on sale for 6 million pieces of eight. Buy the horn, then talk to Captain Kate (the women with the big hat) and get a leaflet from her.

Now go to the local spitting contest. Try spitting and then walk to the flags and look at them. Try to pick them up, then use your horn. All the people will be distracted for a while. Pick up the flags and shift their position. Try spitting again. You will do slightly better, but not good enough.

Go to the bar on Scabb Isle. Show the library card to the innkeeper and this allows you to buy drinks from him. Buy the blue drink and the yellow drink. You'll be given a crazy straw. Use the blue drink on the yellow drink to get the green drink.

Go back to Booty Isle. Go to the spit master. Use the crazy straw with the green drink. This will make your spit thicker. Try the contest again. Not bad, you got second place. Try spitting again, but this time spit only when you see the woman's scarf is flying in the wind. This lets you win the contest. You receive a plaque for your efforts. Go to the antique shop and sell the plaque to the dealer for 6000 pieces of eight.



To get to Mojo, the voodoo lady, you must jump in the coffin that doubles as a boat and guide through the swamp-land

Have a chat with Captain Kate. Charter the ship but don't go to sea just yet. Borrow the book "Disaster: Great shipwrecks of the century." Read the book and note down the location of the sunken monkey.

Talk to Captain Kate again and go to look for the sunken treasure. Go to the location indicated in the book and dive for the treasure. When you've found the ship, pick up the head piece and then use the anchor to go up. Make your way to the antique shop. Give the head piece to the dealer and get the second map piece in return.

Take a trip to Phatt Isle and go into the alley to talk to a man. Play the game with him. You'll always lose, but follow the little guy to another alley. Observe what he does. When he leaves, knock on the slot on the door and ask about the next winning number. You'll be shown two signs. Always answer with the number of fingers you have been shown previously. For instance, if he shows you four fingers then five, you should answer with four. Remember the number and go and play the game again. There is no need for all the prizes, just make sure you win the invitation card.

Head off to Booty Isle and go to the costume shop. Give your invitation to the man and pick up your costume. Walk to the Mansion. The guard will stop you and demand an invitation card and a costume. Wear the costume and then go to the governor's mansion. Go to the side of the building, open the door and enter the kitchen.

If you try to get the fish, you'll be chased outside. This time, try to pick up the trashcan instead. This irritates the chef and he will chase after you. Run around the mansion, enter the kitchen again and pick up the fish.

Enter the mansion and pick up the



Talk to Mojo and you'll receive a voodoo shopping list off her which will enable you to make a voodoo doll of Largo LaGrande



Part III

Walk to the right and you'll find a lot of signs. Walk to the right tunnel and look at the jail. Talk to Wally and return to the signs. Enter the back tunnels and look at the piece of paper in your inventory. Push the bones according to what is written on the paper. You'll need to do it four times, using one of the verses each time you do it.

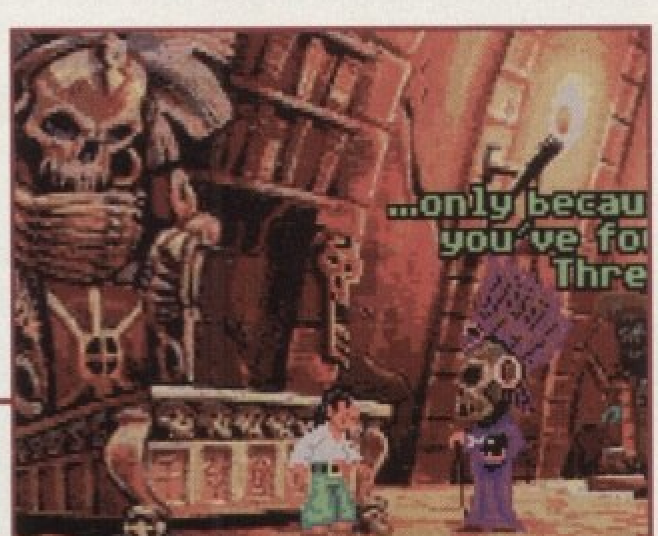
You should find a huge door. Open the door and this will give you a doggy door. Pick up the jail key and you'll then realise you've been trapped. You can't move, but you can still use your mouth. Use the crazy straw on the green drink. Spit on the pan (just below Wally) and the shield (to your right). Notice that they change angle every time you spit on them.

The correct angle will let you spit on the shield and then the spit will bounce of on to the pan which in turn hits the candle. This turns off the light and you'll now be able to escape.

You're now in darkness, so use the box of matches to light up the place, but unfortunately it seems that you should use them somewhere else.



The beach is where the adventure first starts, but have a good look around for a stick as it is an essential item to have in your inventory



Largo, after leaving Scabb Island, goes to see his master, the newly resurrected LeChuck. It's Guybrush's job to see that the evil pirate is put away for good

Part IV

Talk to Herman. You must talk for a long time before you hit the right answer. Pick up the crowbar and the martini glass off the beach. Use the glass with the ocean. Now use it with the still to get distilled water. Pick up the bottle in the ocean and use it on the rock to break it. Open the barrel to get the cracker and give it to the parrot. Note what it says.

Enter the jungle and walk all the way to the big tree. Use the broken bottle on the bag. Get the cracker mix and use the distilled water on it to get two crackers.

Walk to the pond (walk right three times). Pick up the rope and use the crowbar on the box. Pick up the dynamite and follow the direction given by the parrot. You'll find the parrot there. Give another cracker to it and follow the direction given by the parrot. Repeat this process once more and you should find the big X.

Use your shovel on the big X. Use the matches with the dynamite and then use the dynamite on the hole to blow it up. Now use the crowbar with the rope and then the crowbar 'n' rope with the metal rod. Watch what

map piece. Exit the mansion and the dog and the gardener will stop you and bring you to Elaine. Talk to her as sweetly as possible and you should try to get as near to her as possible. After she has thrown the map piece out of the window, pick up the oars.

Leave the mansion and try to pick up the map. The wind will blow it away to the cliff. Pick up the dog. Walk to the cliff and look at the map piece. Go to Phatt Isle and walk to the pier. Talk to the fisherman and have a bet with him. Give him the fish to get the fishing pole.

Return to the cliff and use the fishing pole on the map. A bird will take the map away from you. Walk to the big tree, where you'll see there is a plank in one of the holes. Pick it up and use it in the first hole. Stand on the oars. The oar will break and you'll have a dream. The necessary stuff will be written on the piece of paper in your inventory.

Go back to Scabb Isle and see the woodsmith. Give the oar to him and he'll fix it for you. Go back to the tree and use the oar in the first hole. Stand on the oar. Use the plank in the second hole and stand on the plank. Pick up



The first ingredient for the voodoo doll can be found in the local cemetery. Dig up the grave that belongs to one of Largo's relatives to get your ingredient

the oar and put it in the third hole, then stand on the oar. Repeat this process until you reach the top of the tree. Enter through the door and look at the pile of maps. Use the dog to get the map piece.

Pick up the telescope and make your way to the Wharf. Go to the antique shop and buy the sign beside the parrot. Notice the hook behind the sign. Use the parrot food with the hook. The parrot will turn to look at it. Buy the mirror.

Go to the bar on Scabb Isle. Use the banana on the metronome and then pick up the monkey. Go to Phatt Isle and use the leaflet (from Captain Kate) on the poster. Leave the island and Captain Kate will be captured. Enter the jail and use the key to free her. Pick up the envelope with her belongings inside and you'll find a half bottle of grog inside.

Walk to the path above the waterfall and use the monkey on the pump. The water will stop flowing. Enter the cave which leads you to the cottage.

Talk to the man and try the challenge and see what happens. You'll definitely lose if you don't do something. Take the challenge again, but pick up the mug and use it on the tree to empty it. Now use the mug with the grog. This allows you to win the contest.

Walk to the trapdoor and push the brick. You'll fall straight through the tunnel. Open the window and then use the mirror on the mirror frame. Go outside the cottage and use the telescope on the grotesque statue. The ray of sun will burn a hole in the brick. Push the brick again, look at the skeleton and pick up the map piece.

Go to the library on Phatt Isle, open the lighthouse model and pick up the lens. Go to Wally's place on Booty Isle and give him the lens and the map pieces. He'll ask you to run an errand for him. Go and talk to Mojo and get the juju bag. Look inside it and you'll find a love bomb and a box of matches.

Go back to Wally's place and you'll find out that he's been captured by LeChuck. There is a box lying near the swamp. Look at it, then open and use it.



One of the most important people on Scabb Island is Captain Dread, who for the right price will take you to the other islands





Via Captain Dread's boat you can visit one of the other islands. This time, Guybrush is paying a visit to Booty Island to see what he can find



On the Island of Booty and Guybrush Threepwood bumps into Captain Kate Capsize! Doesn't anyone have a normal name in this game?

happens. In darkness, move the cursor around until you find the light switch. Turn it on. LeChuck is here and he'll zap you to a random room. You must get familiar with the different places and do things fast.

In the first aid room, open the trash-can to get two surgical gloves. Open the drawer to get the syringe and pick up the skull. In the room with many boxes, open all the boxes you possibly can and pick up the root beer, the voodoo doll and the balloon.

If you bump into LeChuck on your travels, give your hankie to him, he'll blow his nose and give it back to you.

In the room with the broken grog machine, use the helium tank with the two surgical gloves and the balloon. This will make you lighter. Use the coin return and a coin will drop out. Wait for LeChuck to enter the room and he'll bend down to pick up the coin. Pick up his underwear.

Go into the elevator. The three balloons you have with you will let you go up in it, but wait for LeChuck to come in before you use the lever to go up. This shuts the door and you'll be able to get LeChuck's beard. Use the juju bag with the voodoo doll, beard, underwear, used hankie and the skull. Mix them together to get the voodoo doll of LeChuck.

Walk around to look for LeChuck. When he enters the room, use the syringe on the voodoo doll. He'll run away from you. Walk around to look for him. From this point on, you can simply sit back and watch the end sequence.

AKIRA AKIRA AKIRA AKIRA



2019 NEO-TOKYO IS ABOUT TO E.X.P.L.O.D.E.

30 YEARS AFTER WORLD WAR 3, KYOKO A MUTANT CHILD TELLS OF THE APPROACHING CATACLYSM.

THE COLONEL STORED CAPSULE 7 WHICH CONTAINS MUTATION 28, BETTER KNOWN AS AKIRA, DEEP BELOW THE OLYMPIC STADIUM AT A TEMPERATURE CLOSE TO ABLOLUTE ZERO.



KENEDA IS THE LEADER OF THE CAPSULES. HIS BIKE IS THE ENVY OF ALL . KENEDA LEADS THE GANG AGAINST THEIR RIVALS THE CLOWNS.





DURING A BATTLE BETWEEN THE GANGS TETSUO, KENEDAS CHILDHOOD FRIEND, LOSES CONTROL OF HIS BIKE AND JUST MISSES HITTING ONE OF THE ESCAPING MUTANT CHILDREN.

TETSUO IS TAKEN
AUTHORITIES
EXPERIMENTED UPO
TEAM THAT LED THE
PROJECT. A MATCHING
IS FOUND BETWEEN
AND AKIRA AND
EXPERIMENT CON
TETSUO MUTATES
NOW OUT OF
CONTROL.



KENEDA AND RESISTANCE MEMBER KEI, MAKE THEIR WAY THROUGH THE SEWERS WHEN THEY ARE ATTACKED BY THE MILITARY AND FLYING BIKES.





TETSUO ESCAPES FROM THE HOSPITALBLASTING EVERYTHING IN HIS PATH WITH PSIONIC ENERGY.

TETSUO THINKS HE CAN CONTROL HIS NEW POWERS BUT HE IS WRONG.



KENEDA MANAGES TO GRAB A BIKE AND FLIES AWAY TAKING KEI ON THE BACK. THEY MAKE THEIR WAY THROUGH THE TUNNELS GUIDED BY KYOKO, WHO HAS POSSESED KEI, IN ORDER TO USE HER TO FIGHT AGAINST TETSUO.

TETSUO MUTATES
HIDEOUS BLUBBERY
TETSUO IS TOTALLY
CONTROL. THE
CHILDREN BEG
RETURN AND SAVE THE
FROM WHAT TETSUO
BECOME .KENEDA
BATTLE TETSUO IN THE
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Alien

INTRODUCTION

This time it's war, which isn't much of a surprise really – things weren't too friendly in the other Alien Breed games either.

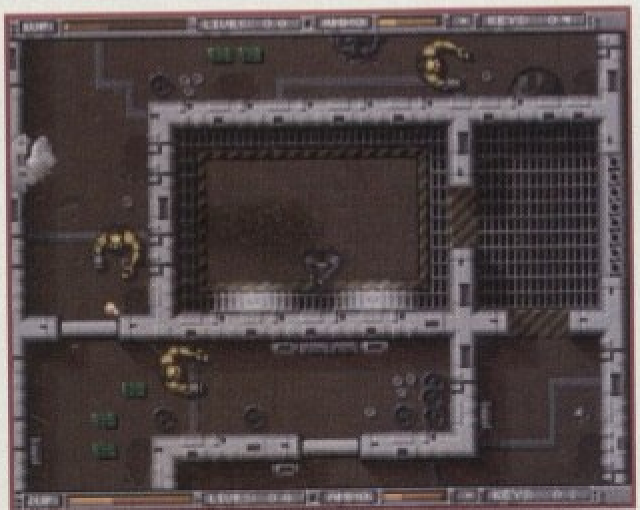
That's right, Team 17 has made another sequel in the vastly popular Breed series. Once again we can expect enough violence and bloodshed to convince parents that Mary Whitehouse was right about computer games.

For many gamers, though, the excitement of battling against hordes of Giger-style aliens has been enough to entice them back to buy the follow-ups. Can this latest instalment maintain the same magnetic appeal?



Log onto the Intex system when you want info or weaponary

- Publisher: Team 17
- Developer: Team 17
- Disks: 3 or 1 CD
- Price: £19.99
- Genre: Shoot-'em-up adventure
- Hard disk install: Yes
- Control: Joystick
- Supports: All Amigas
- Recommended: 68020



Inside the science lab, there's the experiments to deal with as well as the aliens



Hit back with superior fire-power!



Sometimes it's nice to bring a friend

STORYLINE

The inhabitants of a mining colony on Azarin 2E discover that they were not the first to set up shop on the planet, when hungry alien creatures that have been there for years decide the outpost will make a great banqueting hall.

Before they get chomped, the humans manage to get a mayday to you're combat ship. You join a bunch of marines in an assault on the tower complex but – oh dear – everyone else gets killed, leaving you to sort the Breed out yourself. Sound familiar ?

SOUND

It doesn't matter how good a game like this looks if the sound effects aren't up to scratch. Pulverising aliens with streams of cannon fire wouldn't have quite the same appeal if it was accompanied by sorry little bleeps and pings.

Thankfully, Tower Assault resonates with high qualiy samples. Whether your strafing an alien legion with machine gun fire or annihilating a power generator with the tri-lazer, it sounds like serious damage is being done.

For those attracted by the more gruesome aspects of the game, you'll be pleased to come across aliens noisily gorging on human cadavers.

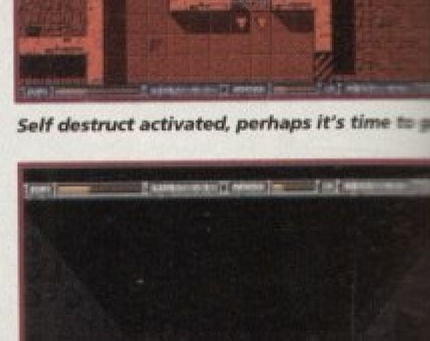
A female voice gives you computerised guidance throughout the game, thankfully all in an English accent that doesn't grate on the ears. Her warnings help to concentrate the urgency at particularly desperate moments.

Music accompanies the opening title screens creating a sense of apprehension, but during the game there doesn't seem to be any. That's not much of a criticism, though, since blaring tunes would not be in keeping with the style of the game.

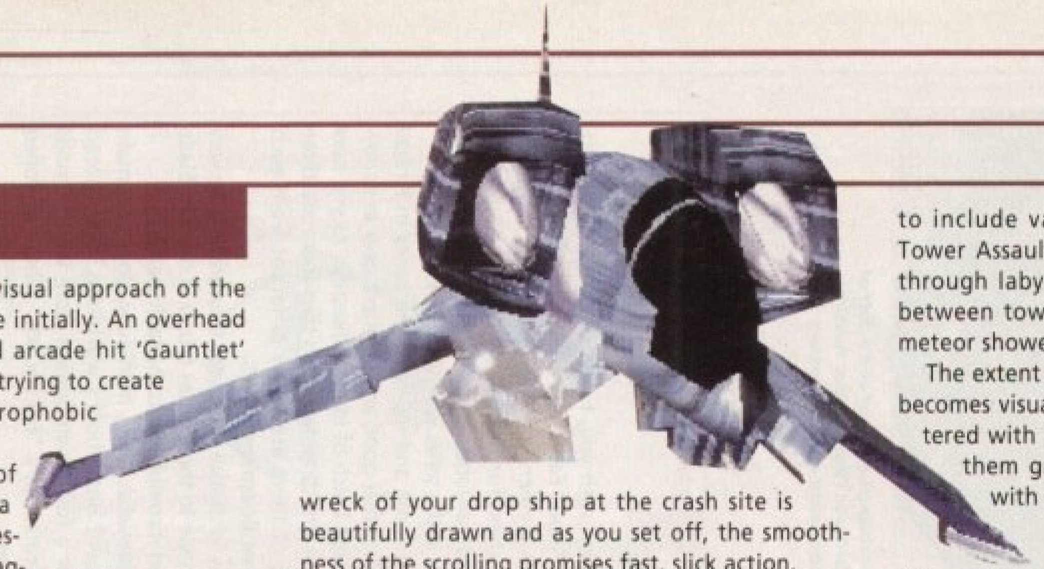
87%



Self destruct activated, perhaps it's time to ge



Shots in the dark – and you thought things couldn't get any worse



GRAPHICS

It has to be said that the visual approach of the game didn't do much for me initially. An overhead view reminiscent of the old arcade hit 'Gauntlet' hardly seems ideal if you're trying to create the excitement of a claustrophobic conflict in the dark.

Despite the limitations of this approach, however, a closer look shows how impressive it can be when used imaginatively. Check out the screenshots and you'll see for yourself how detailed and atmospheric they are.

Right from the start, Team 17 shows its commitment to a high standard in graphics. The shattered wreck of your drop ship at the crash site is beautifully drawn and as you set off, the smoothness of the scrolling promises fast, slick action.

The atmosphere in Breed games is of vital importance. There would be nothing special about this series of games if it were not for the well-drawn locations and the familiar fearsome-looking aliens. Team 17 appears to have made great efforts to include variety and detail into the look of Tower Assault. As a break from fighting his way through labyrinthine buildings, our hero travels between towers on the planet surface, avoiding meteor showers as he goes.

The extent of the massacre in the storyline soon becomes visually apparent. Some buildings are littered with bodies everywhere you turn, each of them gruesomely mutilated and splattered with blood.

New to Tower Assault is the inclusion of dark levels. Here, aliens attack with little warning, their presence only identifiable by the glow of their eyes. This is an exciting and overdue addition which makes for a frantic and often suicidal battle.

80%

Breed
Tower Assault

Team 17 bring us more blood, guts and gore in a game that once again pits you against the Alien Breed. Gareth Lofthouse takes a stomach churning tour



Six rounds and it's still coming !



Your starting point with the wreck of your assault craft



A soldier's life is tough but at least I'm not the cleaner

FLASHBACK

This type of game, as I've suggested before, has its origins in an arcade game called Gauntlet.

This had the same viewpoint, was multi-player and involved fighting monsters and finding keys in order to progress.

The first two Breed games took this very playable idea and dressed it up with the atmosphere of the Alien films. The general consensus seems to be that this is the best implementation of the idea yet.

OPINION 84%

Not a game I found instantly appealing, Tower Assault took a while to win me over. Once I became obsessed with improving my fire-power, however, I became increasingly hooked.

I particularly like the two-player option. Playing with friends suddenly makes computer games seem less nerdy and more sociable. If you have no friends (and I don't) you might try hiring some stand-ins.

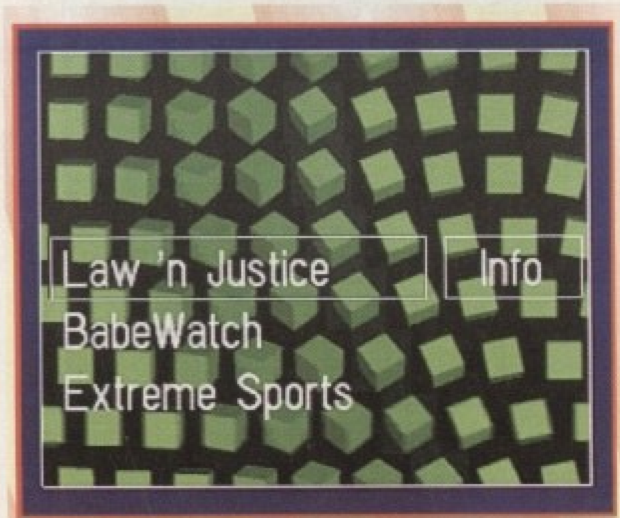
It would be good to see Team 17 applying its undeniable talents to a more original concept than this. The idea at the core of Tower Assault is very old indeed.

All the same, the formula is still working very well thanks to some very imaginative variations. Recommended for Breed fans everywhere, it's also a must for anyone who hasn't played this type of game before.

AMIGA GOLD AWARD

Pinball

You've wanted another version, well you've got one and this time you've got multi-ball to contend with. Jonathan Maddock sure plays a mean pinball as he looks at the third game in the pinball series



The menu has been given a new coat of paint and this time you get to watch a load of spinning 3D objects rather than just a pair of static tables

INTRODUCTION

When Pinball Dreams appeared on the Amiga a few years ago it was instantly proclaimed as a classic and every single gamer had become gripped by pinball fever. No longer did you have to trek down to your local pub or arcade to play the game, all you had to do was switch on your computer. The realism and sheer excitement of Pinball Dreams mirrored the 'real' thing and I think just about everyone has either got or has played Digital Illusion's superb Amiga debut.

Time passed and pinball players were starting to get itchy fingers, so 21st Century Entertainment linked up with Digital Illusions once more to create a sequel. Entitled Pinball Fantasies, this piece of software featured four brand new tables and totally surpassed the original.

Since the release of the sequel, demand from fans for a third game in the series has been immense. 21st Century Entertainment is a company who believes in giving the games public what they want, so without a second thought it talked to Digital Illusions about the possibility of yet another pinball game.

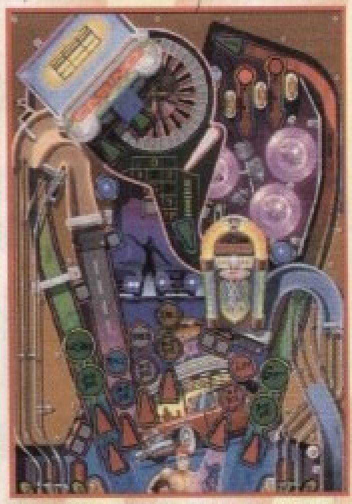
The Swedish developers replied with a triumphant "Yes" and thus started work on Pinball Illusions. This new version features three new tables plus the all-important and incredibly manic multi-ball feature.

It's time to flip your flippers like you've never flipped them before!


The Babewatch tables gives a nod and a doff of the cap to the fantastic TV series that features sun, surf and semi-naked men and women


Whenever you get a multi-ball feature the screen immediately switches to hi-res mode, making it easier to see exactly what's going on




The tables still use some of the elements from the first two games, but there are some slight differences. Answers on a postcard to...

GRAPHICS

Have a quick glance at the screenshots and you'll see that Pinball Illusions looks a lot like its predecessors, but seeing as the graphics in the first two games were rather damn fine then this isn't much of a problem.

There are some small changes, one of which is rather significant, but more on that in a minute. The first thing you'll notice is that the actual balls look a lot better. The Digital Illusions team has used a good ray-tracing effect to make them look more like the real thing. It's not fully light-sourced or anything, but it looks nice enough and it's a lot better than the previous 'ball' incarnations.

The biggest graphical change also involves and affects the gameplay. The almost redundant scoring 'strip' at the top of the screen is now in full-time employment. It's now used to present a selection of sub-games, just like the ones you get on the modern-day pinball machines.

Take the Law 'n' Justice table as an example. One of the sub-games involves shooting a gang of international terrorists by moving your flipper keys from left to right. It's all in the interest of getting a rather good score, and pinball fans might complain that it detracts from the actual game, but it's been known that some of the sub-games have been played longer than the actual game of pinball.

The only other major change worth mentioning is the introduction of a hi-res option. This comes in very handy when you try your hand at the manic multi-ball feature because it enables you to see the whole screen at once.

80%

SOUND

To be honest with you, I didn't like the music contained in Pinball Fantasies. It was far too annoying and got on my nerves to the extent that I was constantly reaching for the volume switch, so I had my fingers and ear-lobes crossed when I heard that a third game in the series was on its way.

Luckily for me and my ears, the tunes in Pinball Illusions are rather good and nowhere near as annoying as the last batch of musical disasters. As you now know, there are three tables, so thus there are three tunes. All of them are vastly different from each other and work extremely well.

The Law 'n' Justice table uses a futuristic tune very similar in style to the themes found in the film Blade Runner and it complements the table perfectly.

The Babewatch table, thankfully, doesn't contain any of David Hasslehoff's warblings, but instead plumps for a full-blown musical score which sounds like the Beach Boy's "Pet Sounds" album all rolled into one tune.

The last table is, erm, different. I don't like Heavy Metal at the best of times, but that's exactly what you get when you play the Extreme Sports table. Imagine Nine Inch Nails teaming up with Pantera and you're getting close to the musical experience that's contained here. I know there will be a load of people out there who will love it, so much so that they'll start stage-diving off their beds. Not my cup of tea, but it just goes to show that Digital Illusions has included something for everyone.

82%

the whole screen at once.

has included something for everyone.

82%

Illusions

Publisher: 21st Century Entertainment
Developer: Digital Illusions
Disks: 3
Price: £29.99
Genre: Pinball Simulation
Hard disk install: Yes
Control: Keyboard
Supports: A1200/A4000?CD32
Recommended: 68020

OPINION 85%

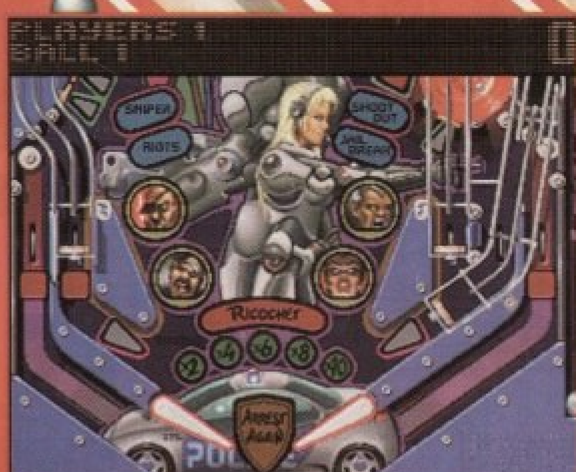
AMIGA GOLD AWARD

Without a shadow of a doubt this is the best Amiga pinball game that money can buy. Fans of Dreams and Fantasies aren't even reading this as they're camped outside their local computer emporium waiting for it to arrive, so there's no point in trying to convince them how good this latest version is because they already know.

If you haven't bought the last two versions and you're new to this computer pinball lark, then there hasn't been a better time to purchase one of Digital Illusions' superb games.

The new features have taken the game that one step further towards making Pinball Illusions even better than the real thing, but what really makes the game is the inclusion of the multi-ball feature. If Digital Illusions had not been able to recreate this on the Amiga and left it out, then this game would've been a major disappointment.

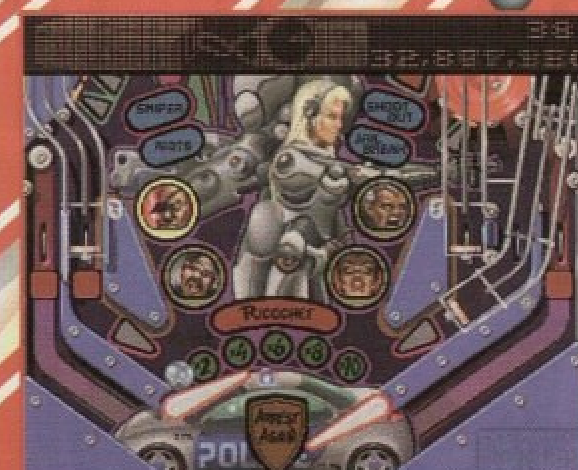
As it stands, the multi-ball feature is in the game and it works incredibly well. Couple this with the brilliant graphics and sound, then add the old staple ingredients of good gameplay and more than a dash of addiction and you've got one hell of a pinball game.



The score is at zero and the pinball fun is just about to start on the Law 'n' Justice table. Get ready to go flippin' crazy!



Thanks to the wonders of technology, here is a picture of the complete Extreme Sports table in all it's glory



One of the new and very interesting sub-games, but due to my lack of pinball expertise I've already lost one of my pinballs

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Road

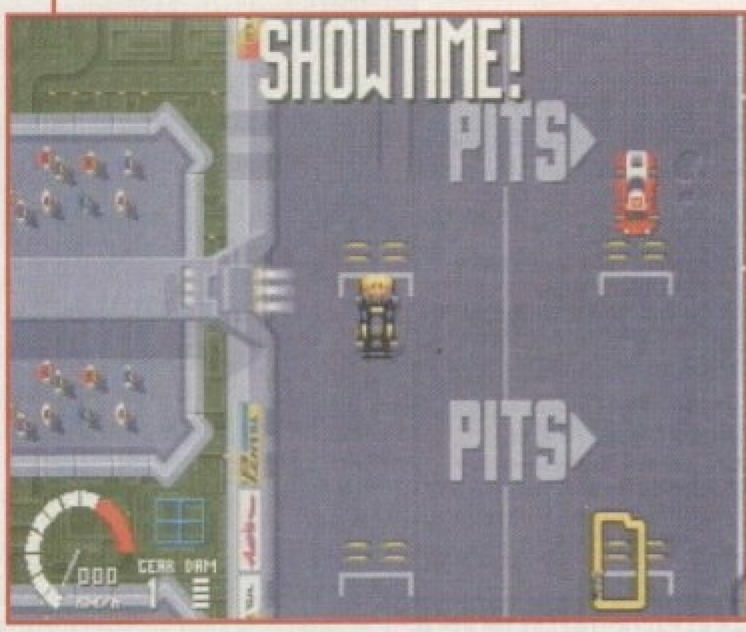
INTRODUCTION

Has no one told Acid Software that good original software doesn't get targetted at the CD32? Only a few months ago it gave us the Star Wars antics of Guardian. This time it's more like car wars with a game that's once again set to surprise the cynics.

No bogus storyline here: The only background you need to know is that it's a car race with no rules, a futuristic challenge where even winning fistfulls of cash takes second place to destroying opponents. Forget good, clean fun – play dirty !



Just one of the sleek turbocharged beasts available



It's showtime as the racers burn off the starting grid



Sooner or later your car will look like this

GRAPHICS



It's true that flash introductory sequences are no reflection on the quality of a game itself, but the animation that opens this game is so stunning it can't pass without mention.

Ravishing ray-traced graphics are used in a 3D animation, depicting fast racetrack action, carnage and death. It's impressively put together, although some may find its black humour offensive.

With a hard act like that to follow, it's not surprising that the game itself is visually more humble. We're basically given a 2D view of the track, so anyone hoping for a virtual racing game for the CD32 is going to be disappointed.

That said, it's not a bad looking game by any standards. The cars all look different and the racetrack scrolls by at a fast, smooth pace with transparent sections revealing a metropolis below the course. After a few goes you begin to notice little details that are simple but effective. As cars collide off each other into walls, chunks of track become progressively more damaged.

Watch heat-seeking missiles snake around the screen as they lock on target, then see the victim car burst into flames and pile into concrete. The frantic pace makes simple touches like this exciting

Given the violent nature of the game, this visual approach is arguably for the best. With its old-fashioned arcade style, all that destruction is in the same fun vein you'd expect from a cartoon.

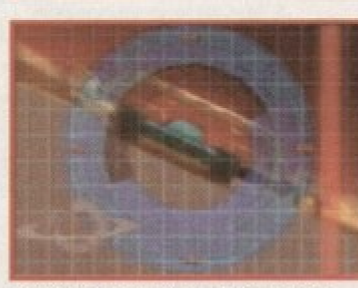
75%

FLASHBACK

This type of racing game has a long history, with Acid's Skidmarks being another fine example of how well it can work. This nifty mover received high acclaim when it reached our office last year.

The general consensus is that Skidmarks looked better, thanks to its isometric view, as opposed to Roadkill's flat 2D approach. But on the other hand, you couldn't kill anything in Skidmarks.

All those missiles and power-ups take Roadkill down a new avenue and make for a different brand of arcade fun. Somehow your priorities change and you find yourself more concerned about wiping the opposition out than you are about winning.



Locked on target: a missile seeks its prey in the introduction



It's a bit sick, but the animation gets you in the right mood for the game

Fancy a racing game so violent it makes Mad Max look like a considerate driver? Gareth Lofthouse discovers the meaning of the words 'Crash and Burn'

kill

GAMEPLAY


Slam your way to victory !

The idea behind this game and the way it has been presented is not particularly original. That's why it's such a surprise to find yourself getting increasingly hooked to the point where you realise Roadkill is an addiction.

The primitive thrills of speed or violence have always been popular in the action game genre, and a title that combines the two will always have some promise.

Controlling the car is simple as far as using the control pad is concerned, with nothing more than left, right, acceleration and fire to cope with. Mastering the timing for corners, however, takes considerable practice to perfect.

From the start of the race when Freddy shouts "Showtime!' the proceedings are a lot more aggressive than in the standard racer. There you are moving through the field in a sportsman-like manner, and suddenly everyone's trying to slam you into the spikes of the kill-zone.

Players soon get into the spirit of things, however, and whether they like it or not they set off round the track careering like ping-pong balls between enemy cars.

Crashes are part and parcel of this game. If you come off the road in some races even once you'll be hard pushed to qualify, but here, everybody's in the same boat. Use your weaponry and drive well and you can move from last to first in the space of one lap.


Hit the ramp but take care not to lose control or you'll spin into the spikes

There's lots of features and power-ups to collect as the game develops, the best of which are the rockets and missiles. These can put opponents out of action for a while, but their use must be well timed to gain jackpots and super jackpots.

Unfortunately, your rivals have the nasty habit of returning the favour, so you'll find your armour gauge going down as you crash and scrape along. On longer courses you'll have to nip into the pits for repairs, which in practice turns out to be a task made unnecessarily tricky.

Other items to aim for include speed-ups, temporary traction improvements and deflector shields, which provide protection against incoming missiles. Bonuses and money can also be picked up.

The way the courses are designed is instrumental in creating a lot of the chaos. Later tracks have alternative routes, where time considerations are traded off against the amount of power-ups you can find. Sometimes the road is so tortuous it's almost impossible to anticipate where you're going until the dangers become fixed in your memory.

If you think you can handle that without too much difficulty, you also have to cope with roadside cannons, ramps, minefields and skidtraps. Shortcuts allow you to race for record lap times but they are even tougher to negotiate.

The game has three skill levels (you'll be glad of the easy option at first) and a choice of automatic or manual gears, though the latter is not very satisfying in use.

It's a tough and occasionally frustrating game, so it's as well that Acid Software has not forgotten to include a password saver, a problem which marred Guardian. As it is, a lot of varied action and the need for the odd tactical decision make Roadkill an adrenaline burner.

SOUND



The most important sound in the game is the sampled speech. A Freddy Kreuger sound-a-like eggs you on throughout the race, urging you to "destroy" an opponent or "take his life."

You can seriously increase your earnings in the game by making enough roadkills, and sound effects blare triumphantly when you destroy enough to get the jackpot.

Otherwise, it's the usual racer stuff. You know, revved engines, gear changes, skids and bumps – plus rocket launches, tracking missiles and lethal explosions at every turning.

82%

- Publisher: Guildhall
- Developer: Acid Software
- Disks: 1
- Price: £29.99
- Genre: Race-'em-up
- Hard disk install: N/A
- Control system: Control pad
- Supports: CD32
- Recommended: N/A

OPINION

87%



Acid might deserve some criticism for not coming up with the original concepts that make a classic game. On the other hand, its recent games have had a healthy lack of pretention and they fulfill they're modest aims very successfully.

A sore thumb and a foul temper were sure signs that the game had me gripped. It may not look that much, but it has all the elements that a thoroughbred arcade game should have.

The odd tweaking here and there would have been nice. Earning all that cash is fine, but it would be better if you had something to do with it – like the option to buy better cars for example. And of course, a two-player option would make it outstanding.

This is just me finding fault, however, because the developer deserves full credit for balancing so many appealing features in one game. Our jaded reviewers just keep sneaking back for one more go.

The developer has done the CD32 proud with a game that sets the Acid test for arcade action in 1995. Roadkill is yet another triumph for a software house that can take a simple idea and make it shine.

INTRODUCTION

No matter what anyone says, Sensible Software is the biggest Amiga software developer. With such stable and enjoyable titles as Sensible Soccer, Wizkid, Mega-Lo-Mania and Cannon Fodder, the boys have raked in the awards and, more importantly, the sales from the software endeavours.

This year, Sensible has been working on the sequels to two of its biggest ever products. Sensible World of Soccer, the follow-up to the world's most popular football game will appear within the next month, but first out of the Sensible starting blocks is Cannon Fodder 2.

The original game sold by the bucket load and gamers were impressed with its simplicity and the fact that it was packed full of more action than an early Arnold Schwarzenegger movie. Cannon Fodder, at the time of its release, received a lot of bad press from the tabloid newspapers who branded the game 'shameful' and warned readers not to buy it.

The inclusion of a picture of a poppy and the strap-line "War has never been so much fun" were the reasons why the tabloids and British Legion Chiefs got so angry, and they tried to get Cannon Fodder banned. Even though it wasn't done on purpose, it was insensitive, so Sensible took out the poppy and displayed a message within the game disassociating Cannon Fodder from the British Legion.

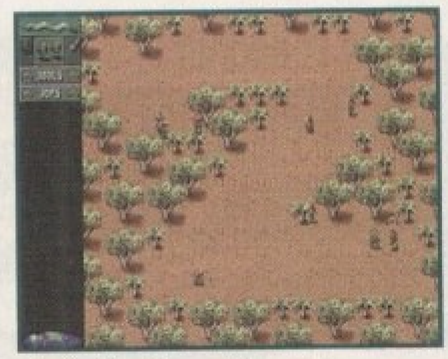
However, all this palaver turned into what was perhaps the best advertising campaign that publishers Virgin could have ever hoped for, and Amiga gamers couldn't get their hands on the product quickly enough.

Forget about the publicity before the release of Cannon Fodder though and you'll find a game that was packed full of top-notch graphics, sound, playability and addiction and that's the reason why Sensible's shoot-'em-up achieved as much success as it did.

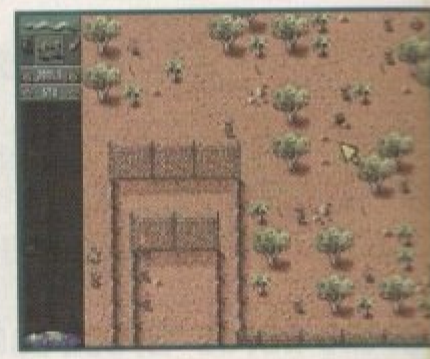
Sensible Software, after much public demand, decided to do a sequel and it has arrived. Will Cannon Fodder 2 shoot its way to glory once more or is Sensible's second effort lacking some fire-power? For answers to these questions all you need to do is read on...



The recruitment screen has been given a new coat of paint and the gravestones have been replaced by skulls on sticks



The first level is easy. You must destroy all the Arabs with your trusty squad of soldiers



With no visible signs of entry into the fenced-off area, it looks as if you'll have to find another way in.

Cannon



The Medieval level features Knights who, for some historically inaccurate reason, are armed to the teeth with rocket-launchers

GRAPHICS

On first glance, Cannon Fodder 2 looks virtually identical to the original game, especially when you're playing through the first couple of missions.

Another couple of missions later, you stumble upon a switch and unknowingly summon a bunch of aliens to Earth. You get to board their ship and this is when the graphics start to change, but not necessarily for the better.

The alien levels aren't the most original things you've ever seen and whoever chose the colour schemes should be put away in jail by the Department of Bad Taste.

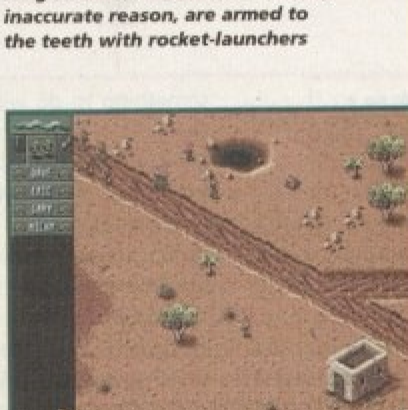
On other levels you take a trip to medieval world which features Knights of the round table and spectacular castles, plus you get to visit Chicago where you roam the mobster riddled streets. To be perfectly honest, although each level has its own theme the graphics aren't particularly amazing. Maybe I was just expecting too much, but I didn't get the feeling that I was playing a brand new game.



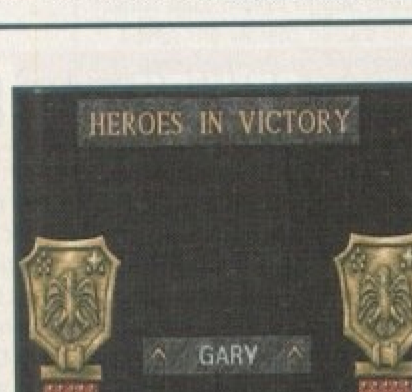
As far as I can see, Cannon Fodder 2 doesn't contain any graphics that you haven't seen before in the original game. The animations, including the 'pained death,' are still in there, but nothing new has been added which is a real shame as I'm sure fans of the original would've loved to have seen a few more additions, no matter how small.

Overall, you'd have to say that the graphics are just as good as the ones seen in the original – which were pretty good at the time – but I would've liked to have seen something new this time around.

70%



You start off this level with four Arabs running straight towards you and you've got to be quick on the mouse button to survive the attack



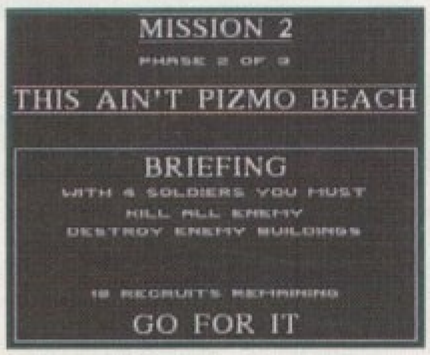
As you can see, the 'Heroes in Victory' screen isn't any different to the one seen in the original Cannon Fodder



Flicking the switch on this Beirut level summons an alien spacecraft down to Earth. Why this happens isn't made clear



The desert levels are full of Arabs, all intent on making sure you don't make it to the next level – rapid-fire shooting should help



The humorous titles seen in the original Cannon Fodder are back. Not all are funny, but most are taken from obscure song titles



While you're wandering around the various levels, keep an eye out for partially-hidden mines. One false step and...boom!

Fodder 2

The return of the shoot-'em-up game that the Amiga world has been eagerly waiting for. Jonathan Maddock loads up his gun and blasts his way through Sensible's sequel.

- Publisher: EVirgin
- Developer: Sensible Software
- Disks: 3
- Price: £26.99
- Genre: Shoot-'em-up
- Hard disk install: No
- Control: Mouse
- Supports: A500/A600,A1200/A4000
- Recommended: 6800

SOUND

The first Cannon Fodder featured the now classic 'War has never been so much fun' tune and not to be outdone, the sequel features yet another composition of musical excellence.

Very much in the same vein as the first piece, with plenty of strong vocals, the song has now got a dance edge to it. It's a good piece of music, but as soon as you've heard it once you'll skip past it with a click of the mouse-button the next time you load up the game.

Actual in-game music and sound effects are identical to the sounds heard in the original Cannon Fodder. This, I suppose, is a bit of a shame, but the only sounds you're interested in hearing are gun-shots, explosions and the screams of pain as your enemies die a horrible painful death.

Yet again, there is nothing that new on the sound front, but what's in the game is adequate enough to satisfy most gamers.

72%

OPINION 71%

Cannon Fodder 2 should've been one of the Amiga games of the year, but there are a few problems that keep it away from the charging pack.

For starters it should never have been a sequel – the actual game is a lot more like a data-disk than a follow-up to Cannon Fodder. There are far too many similarities and not enough differences to make this sequel a classic.

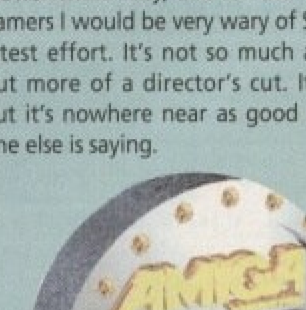
The biggest problem of all is the difficulty level. It's set way too high. Now maybe it's just me, but I like a game to get progressively harder rather than getting virtually impossible after just four missions, which is exactly what happens in Cannon Fodder 2.

Gamers out there might be doubting my gaming talents at this moment in time, but everyone who has had the pleasure of playing Sensible's shoot-'em-up sequel in the *Amiga Computing* office has suffered exactly the same problem.

The game will last you a hell of a long time, but I'm sure you'll be thrashing your mouse to bits before you even get to mission five, and you have to consider that there are 24 missions in all.

Another slight problem is that you have to guess what is going on in the game because there is no plot explanation while you play along. One minute you're in Beirut, then you're in space and then you're back to Earth, but back in Medieval times. It's all very confusing!

There will a lot of Cannon Fodder fans who will no doubt buy the sequel no matter what I say, but for the rest of us gamers I would be very wary of Sensible's latest effort. It's not so much a sequel, but more of a director's cut. It's good, but it's nowhere near as good as everyone else is saying.

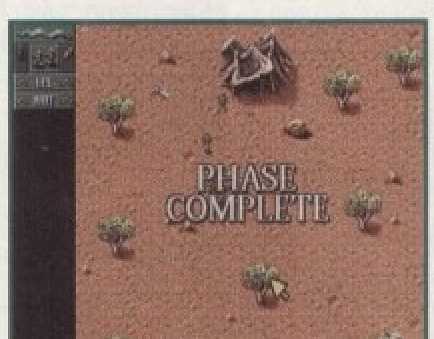




The alien level is the toughest Cannon Fodder mission I've ever played, three days of playing just to defeat the first phase



The grenades are all-important on this level and they're protected by a couple of rocket-wielding green men from outer space



The remaining squad members who haven't been blown up jump for joy as they complete yet another tough phase

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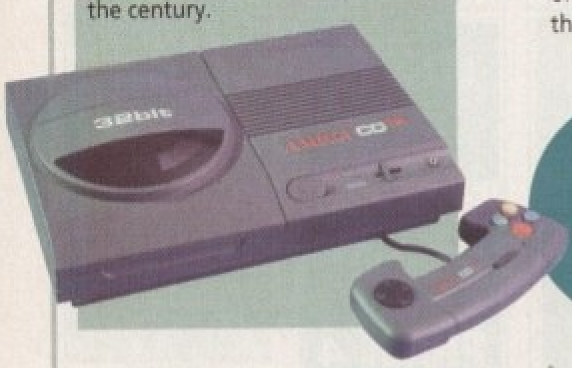
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The CD32 has been in our shops for quite a while now, but with all the uncertainty in the industry it perhaps hasn't sold as well as it should. But now Amitek has come up with a bit of a brain wave – sell the CD32 bundled together with seven games and attach a ridiculously cheap price tag to it. We take a look at whether it really is sale of the century.

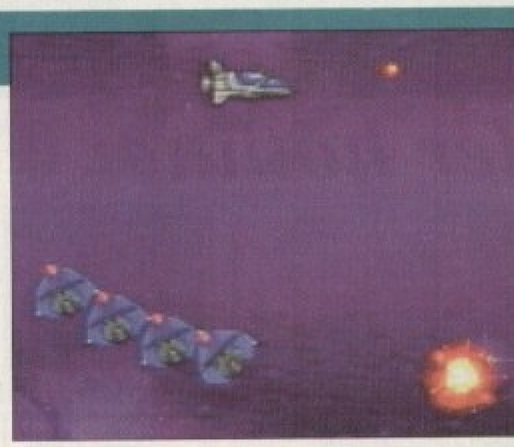


Project X

One weird planetary-themed game in the pack is Project X, an arcade-style blaster .

Deadly mutated insects have been unleashed on the planet Ryxx and it's your job to wipe them out. You must fly through five massive levels blasting everything in sight with a variety of weapons, from plasmas to lasers. The end-of-level guardians provide a tough challenge and bonus stages add variety.

A chunky blast-'em-up with smooth scrolling, tons of sound effects and slick graphics that has gone down well with fans of the genre.



Arcade shoot-'em-up, Project X is an addictive blaster

CRITICAL system analysis



Searching for a bargain? Tina Hackett thinks she's found a purchase that will keep even the most thrifty of you happy and will lighten up the eyes of all CD32 enthusiasts well into the New Year

Cannon Fodder

One of the best strategy/shoot-'em-up games of all time, Cannon Fodder from Sensible Software was a best seller across many formats. Now on the CD32, the idea behind it is to head a bunch of rookie soldiers across various terrain to kill the enemy – okay, so it's not politically correct but I don't know many people who have played this and not liked it!

You get 15 new rookies for each mission and over 23 missions in total. There are five different settings over which to test your skills, and the missions vary from simply blowing away the enemy to getting in to their territory and blowing their bases up.

All this is accompanied by great cartoony graphics, satisfying blast noises and yelps from the enemy as you shoot them into oblivion. Mind you, it's not all heartless blood and gore (though the cartoony graphics remind you it is just a game after all) because there are some quite heart wrenching moments, such as having to put a bullet in an injured comrade to put him out of his misery.

Sensible Software really did break the mould when it made this one. It's a highly original, addictive and very playable title and an excellent addition to this pack as it will appeal to nearly everyone.



Highly original gameplay has made Cannon Fodder a classic

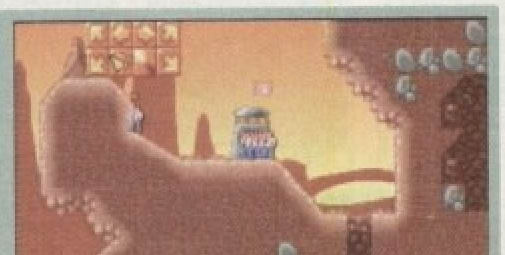
Diggers

Lemming-esque platformer, Diggers is a nice addition to the pack as it's a real brain taxer. Set on the Planet Zarg, you have one month to dig up as much treasure as possible. You choose from four digger races to help you on your quest and over a total of 33 levels, you will have to direct your little men to dig for the treasure you're after.

Each race of diggers have their own strengths and weaknesses and you compete against another race in order to win. You can eliminate your opponents by either killing them or by raising cash by selling the jewels you find.

Control is by an icon system which allows your team to run, teleport and dig but you can also save up the cash to buy tools to help your mining such as tunnelers and telepoles.

Diggers is one of those engrossing games and with loads of levels it promises to last ages. Being a CD specific game, you also get the full 256 colour graphics and CD quality music and sound effects.



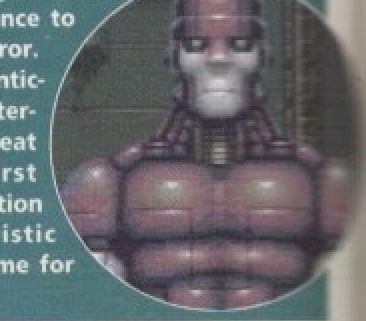
Get using your brain in Millennium's unusual puzzler, Diggers

Liberation

Futuristic 3D adventuring is the order of the day in Liberation. Set in the 29th Century you play the part of Trill, the all-round good guy with the mission of saving the universe from the secret police.

On your mission you will take control of your four droids and will come across all kinds of weird alien creatures and other inhabitants who you must interrogate to gain enough evidence to expose the corruption to the Emperor.

Digitised speech provides authenticity to the game and makes the interaction with other characters a great deal more interesting. The first person perspective adds to the action and works well with the futuristic graphics. A great atmospheric game for all adventure-hungry gamers.



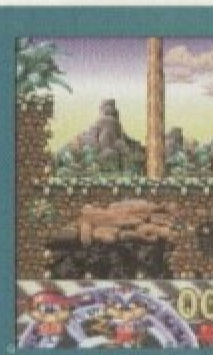
Oscar

Although not the definitive CD32 platformer, Oscar is definitely a title of exceptional quality. The game's theme is movies and as you can probably guess from the name, it involves Oscars which you must locate around the levels to score points.

You play a cute little critter who must travel through the seven gorgeous levels taken from different film genres such as prehistoric, wild west and horror. Each one is beautifully themed with appropriate graphics and baddies so for example, in the war level you get chased by soldiers or in the horror films you'll have to look out for raging monsters.

Special powers such as springy shoes, wings and shields can be collected and with tonnes of baddies to kill, levels to jump and Oscars to find, you're in for a real fun-packed game.

Although the gameplay and sound is your usual platform style, the superb graphics and spectacular effects, such as the reflections in water, and the way the levels are created around films really do make this title rather unusual and a joy to play.



Themed levels make Oscar a highly enjoyable game

ZONE pack CD32

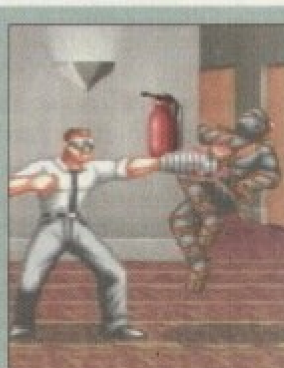
Ultimate Body Blows

The Body Blows games met with a great deal of enthusiasm when they appeared on the Amiga. Then it appeared on the CD32 to the cheers of CD32 owners everywhere.

And this time it goes one better, containing characters from both Body Blows and Body Blows Galactic. The sound is improved, the 256 colour capability exploited, and extra options included.

A massive 22 characters are included, all with individual skills and personalities. The option to play as a tag team is available, with 11 characters on each side fighting against each other.

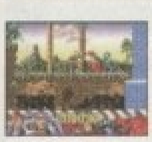
A storming sound track, detailed backdrops and smooth scrolling make this the beat-'em-up to really kick other contenders in to touch.



Ultimate Body Blows has tons of characters, all with their own range of moves

Verdict

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It will be one happy kid (or adult, for that matter!) who opens this on Christmas morning. This whole pack bought separately would cost around £463 but in this pack the whole caboodle costs only £239, which even to those who aren't all that hot at maths will realise is one heck of a bargain. Yes, I know I stand the risk of sounding like a Danny Baker voice-over advert here, but this really is an excellent buy.

The games included are wide ranging to cater for all tastes and all of them have their particular merits. Microcosm shows the capabilities of the machine in its stunning intro, Cannon Fodder – one of the most original games ever – packs in tons of gameplay, Ultimate Body Blows and Oscar are both prime examples of their genres, Project X provides the more traditional gameplay, Liberation shows that the CD32 can do just as good 3D perspective games as other machines and Diggers – a puzzler that stretches the old brain!

There looks to have been a great deal of thought gone into selecting the games for the pack and the obvious temptation to stick a lot of duff games in has thankfully been avoided. These are all top-selling titles which makes this pack a very worthwhile purchase.

Microcosm

Psygnosis' shoot-'em-up really shows what can be done on the CD32 as regards flashy introductions go. A long intro sequence using slick raytraced graphics tells the story of the rivalry between two corporations. Live action sequences are combined with computer graphics to create some excellent cinematic effects and the atmosphere created really is incredible.

Briefly, the story is set at the time of some recent experiments into miniaturisation that makes it possible to send one human being inside another, so one of the enemies of these rival corporations decides to inject a mind-controlling virus into his rival. But as you can imagine, he becomes a bit 'suss' and his company decides to inject a craft in to fight the viruses.

So the game takes place inside a human body and you have to fly around the veins and arteries. It is very well done, with the graphics conveying the insides brilliantly!

Gameplay is basically just an average shoot-'em-up, but with this stunning intro it's a great way to show off the CD32, especially to those console cynics!



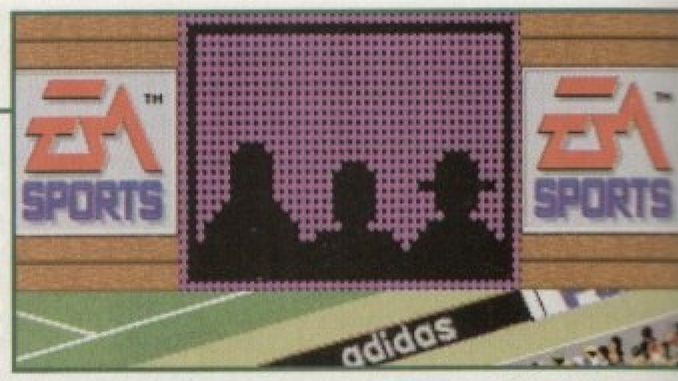
Although rather average gameplay, the intro for Microcosm is superb



FIFA

INTRODUCTION

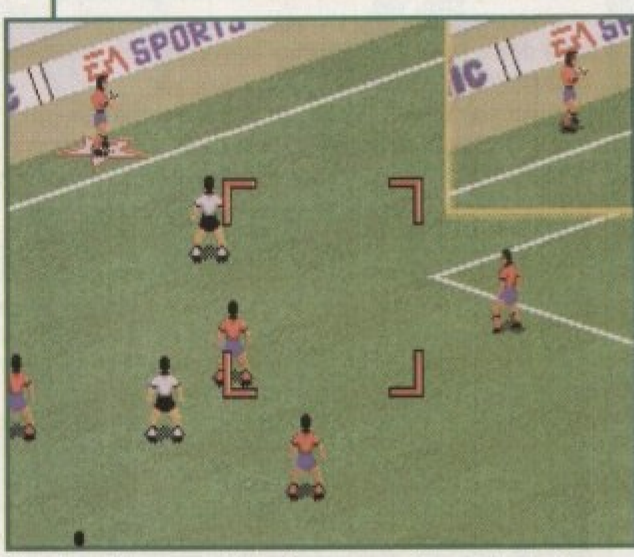
EA's football sim was met with great enthusiasm when it was released on the consoles and now it's here on the Amiga. But a lot of conversions fall by the wayside and don't seem to have the magic they had when they first hit other formats. Take Kick Off 3, for example. On the console it really was the business but when it hit the Amiga it was nothing more than blatantly average. However, the opposite was true with Aladdin – great on the consoles and it worked just as well on the Amiga. So now FIFA is finally here, but will it have what it takes or will it be just another console cash-in?



Score a goal and the score board displays a celebratory animation such as a Mexican wave!



The many pitch options like drenched can make the game trickier



The throw-in system of directing a square is easy to operate

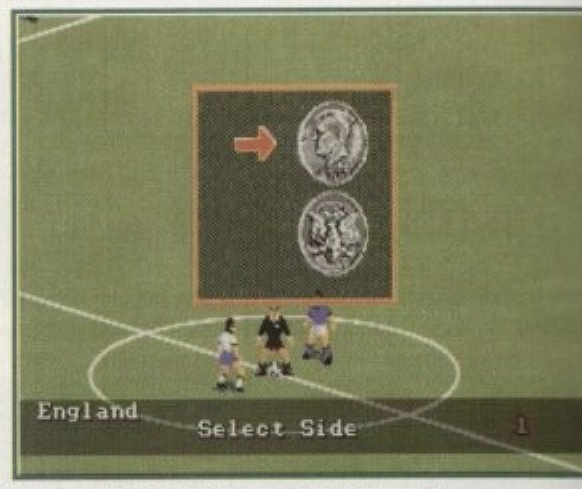
FLASHBACK

Yes, I'm going to have to cite Goal! and Sensible Soccer once again in a football flashback. They were the greats of their time and most people have played them, so they're the most obvious examples to use.

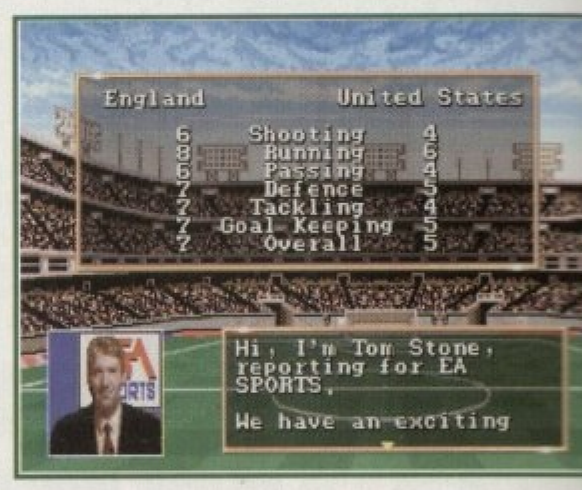
So where does FIFA stand? Well, it's graphically more superior with great crowd details, the sprite size shows all the moves well and the sonics create a good match feel. But it's playability that matters and FIFA simply doesn't kick it against these old veterans.

Two-player Goal! was an absolute dream to play and made for a really exciting game, and Sensi Soccer was a new and fresh approach with it's miniature sprites and addictive playability.

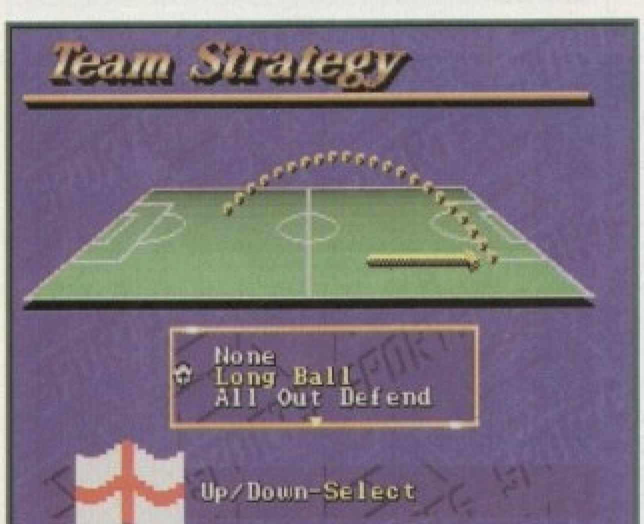
FIFA isn't a bad game, it just doesn't have that indefinable quality that makes you want to keep coming back for another game, and it doesn't have the excitement either. On the other hand, it has far more options than others and plays a lot better than the awful USA World Cup game and the mediocre Kick Off 3.



Heads or tails to decides which way you play



While the commentator babbles on, compare how the teams shape up



Choose an appropriate team strategy – hmm, long ball, I think!

SIMULATION

Well, it seems all the players have come complete with jet-lag from their long conversion from the console, as this is far too slow a simulation. The moves all work nicely though, but it all plays at a snail's pace. For those who really like to be in control of the game, planning each little move precisely, then it's quite enjoyable, but the main appeal of football is its excitement and somehow this fails to come across, especially in two-player mode.

It does have its redeeming qualities though. The way throw-ins and corners are taken is unusual but works well. By moving a box over the area you want to direct the ball in you get accurate results easily. Substitutions can also be made accurately as each player has a different rating for each of the attributes, like their shot power or passing skills.

The different options also make for a more realistic game, with a feature for changing the weather and the pitch type or for choosing the simulation or action option.

GRAPHICS

Overall, the presentation of the game has been well thought out with clear and colourful information charts which makes setting options and the like easy.

The actual stadium is very detailed, with the crowd shown quite closely. EA has opted for a large sprite size which works well in showing all the different moves, and the match is viewed from side-on which gives a more realistic angle. However, when the ball crosses the line in to the goal it is difficult to see as it doesn't actually look as if it has gone in making, things rather confusing.

The animations of players add a nice touch. For example, when a player scores he runs down the pitch with a celebratory dance and the scoreboard shows an animation of a Mexican wave or hula girl. However, some of these are just adverts and there's no way to skip them which proves irritating.

90%



And it's a goal – goalies can either be manual or computer controlled

International Soccer

Tina Hackett plays referee to decide whether EA's latest football sim should get a sending off or whether it's up there with the Premier League of footy games.



Consider your team formation carefully

SOUND

Even some of the best footy sims have been let down by an appalling crowd effect – some sounding more like gurgling drains than anything else! Luckily, FIFA is a pretty reasonable attempt in portraying the excitement of a football match.

There is a good crowd chant and the appropriate roars and boos that run throughout, but unfortunately when a goal is scored there is a big delay between this and the crowd cheering louder – if it gets any louder at all, which it sometimes doesn't!. All in all though, it does work well and gives the authenticity of a match.

66%

> "Oh, he's football crazy, he's football mad, and the football it has robbed him o' the wee bit sense he had."
>
> *Jimmy McGregor, 'Football Crazy', 1960 song.*

- Publisher: Electronic Arts
- Developer: In-house
- Disks: 3
- Price: £29.99
- Genre: Sports sim
- Hard disk install: Yes
- Control: Joystick
- Supports: A500/A600/A1200/A4000
- Recommended: 68000 upwards

OPINION **68%**

AMIGA COMPUTING BRONZE AWARD

Firstly, when you load the game up you notice the vast amount of options and the simplicity with which they can be selected. You have many play modes from league, tournaments and exhibition matches. Goalies can either be manual or computer operated and you can also choose whether you have full, intermediate or no fouls at all.

When it comes down to selecting the style of play there are also plenty of options to select. Team coverage allows you to select the movements of your defence, midfield and attack, and you can choose formations and strategy in a very straightforward way.

Graphics convey the ground well and the animations of the sprites add some nice moments to the game. The pre-match commentary is also a good idea and gives a brief background of the teams and a comparison of their skills.

The vast array of moves you can carry out work well. From back passes, headers and overhead kicks, even novices to the game will be able to achieve a satisfying playing style.

However, it's not all wonderful by any means. The game is painfully slow which makes for an incredibly boring match at times. In fact two-player mode becomes rather tedious too quickly. It's not bad if you fancy a change to Goal! and Sensi, but as it's no way near up to the same standard you will find you become rather bored and irritated by it. Not a patch on its console counterpart I'm afraid!



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D067 A1200 "POINT OF SALE" AGA
used in France to promote the A1200
D088 MADONNA "SEX" DIGIPICS [3 DISKS]
Madonna in all her black and white glory!
D095 SPACEBALLS "9 FINGERS" [2 DISKS]
another classic. Improved "State of the Art"?
D099 COMPLEX "ORIGIN" AGA [2 DISKS]
excellent AGA demo from Complex
D100 VIRTUAL DREAMS "FULL MOON" AGA
D102 XANADU "EXPLICIT 2" AGA
D104 REDNEX "EMPTY HEAD" AGA
D112 AXIS "BIG TIME SENSUAL.." AGA [2D]
must be in the all time wanted list!
D113 KEFRENS "INTERCHANGE" AGA
D115 MYSTIC "VITAL" AGA
D122 COMPLEX "REAL" AGA
the best AGA demo from Complex
D125 RAM JAM "TASTE THE..." AGA [2D]
D127 OXYGENE "CUZCO"
a very good non-AGA demo, for once!
D128 MINA OMISTAN AGA
a "video" type demo. Worth seeing
D130 FAILIGHT "LOVE" AGA [2 DISKS]
another popular demo by Virtual Dreams
D132 ABSOLUTE "CREAM" AGA
D133 STELLAR "MINDFLOW" AGA
number one at the Assembly '94!
D135 POLKA BROS. "ARIEL ULTRA" AGA
D136 POLKA BROS. "GEVALIA" [1MB]
a superb non-AGA demo. Get this!
D138 NGC "ARTIFICIAL PARADISE" AGA [2 DISKS]
D140 RECALL "RAVE NATION" [2 DISKS]
D142 RAGE "MAXIMUM OVERDRIVE II" AGA [3D]
wow! This is great and lasts for ages
D145 CCCP "RAVE"
poor start but gets going - a rave type demo
D147 V. D. "BREATH TAKER" [5 DISKS] [4MB]
this is an imagine object type demo
D148 URBAN "SOME JUSTICE '94" AGA
this has a superb soundtrack. Must be heard!
D149 MYSTIC "ILEX" AGA
D151 DIGITAL "SEVENTH HEAVEN" AGA
D153 COMPLEX "SEDUCTION" [2 DISKS]
back with a decent music disk this time!
D154 SPACEBALLS "THE SUPERANAO TAPES"
D155 MYSTIC "DIRT" AGA
D156 BETON DESIGN "RUMBLE BUBBLE" AGA
this is very good despite what CU Amiga gave it!
D158 REBELS "SWITCHBACK" AGA [2 DISKS]
one of the best AGA demos this month
D159 242 "THE TRACKERS"
D160 OZONE "THE SWAMP THING"
D161 HAUROBB "JAMMIN"
D163 PRODIGY "NO GOOD"
D164 TRSI "ARTIFICE" AGA [2 DISKS]
a reasonable AGA demo from the demo "gods"
D165 INFECT "DO YOU BELIEVE?" AGA [2 DISKS]
an excellent AGA demo, checkout the landscapes!

Games

GM11 MEGABALL AGA
bat and ball game - like Arkanoid
GM22 MISSILES OVER XERION [2 DISKS]
excellent defender type game
GM27 MR. MEN OLYMPICS [2 DISKS]
GM41 TETRIS DUAL [AGA]
GM45 ROAD TO HELL [1.5MB]
superb car racing game
GM46 TANKS 'N' STUFF
addictive 1-4 player tank game
GM52 OVERLANDER
GM55 BACMAN [AGA]
GM57 F1 MANAGER
GM60 BAZZA AND RUNT AGA
wow! This platform game is a must!
GM63 U-CHESS v2.89 [AGA] [4MB]
an excellent AGA chess game
GM65 THE SHEPHERD
one of the best PD games - like Populous
GM67 BLACK DAWN II
GM68 GLOBAL THERMO NUCLEAR WAR
GM70 ABASSADOR FRUIT MACHINE
GM71 MADFIGHTERS II AGA [3 DISKS]
GM73 KNIGHTS v2.5
a sabre-wolf type game. Superb!
GM75 CYBER CORPORATION [2 DISKS]
wow! Alien Breed type game - superb GFX!
GM76 SCRABBLE
GM78 STARWOIDS [1MB] [2 DISKS]
thrust and oids mixed - very addictive game
GM80 XENOSTAR [1MB]
GM82 NANOFLY V1.05
GM83 ZOMBI APOCALYPSE II
GM88 MONOPOLY v1
GM89 3D TITANIC ADVENTURE
GM91 CHESS GAME AND TUTOR
GM92 ROCKETZ AGA
get this now! This is a superb 2 player game
GM93 KLONDIKE III AGA [4 DISKS] [4 MB] [HD]
GM96 GREEN FIVE
a Flashback clone with decent graphics
GM97 TOP HAT WILLY
an Amiga "Jet Set Willy" rip-off. Addictive!
GM98 XENOMORPHS
GM99 SANTA AND RUDOLF DO XMAS
GM100 HELICOPTER MSSION
ok, so it's in German, but this is worth playing!!
GM101 CHAMPIONSHIP WRESTLING [2 DISKS]
GM102 SOLO ASSAULT
a decent game similar to "Wing Commander"
GM103 SUPER BATTLE ZONE
GM104 ART OF BREAKING HEADS [6 DISKS]
excellent! A PD version of Streetfigher. Get this!
GM105 DYNAMITE WARRIORS 2
GM106 DELUXE GALAGA v2.4
latest version of the brilliant shoot-em-up
GM107 AUTOMOBILES v1.11
latest version of the "Skidmarks"-type game!
GM108 TMA
linear, puzzle cum shoot-em-up

KLONDIKE III AGA

Klondike III is the latest version of this very popular 256 colour card game for all AGA Amiga users. Construct your own cards or buy some of the following:

Anims Cards
Art Cards
Cindy Crawford Cards
Betty Page Cards
Hajime Cards
Star Trek Cards
Sandman Cards
Marilyn Monroe Cards
Ellie McPherson Cards
Star Wars Cards
Return of the Jedi Cards
Empire Strikes Back Cards
Swimsuit Cards
X-Men Cards
Faces Cards
Prehelion Cards

All Card Disks 99p Each!

Klondike III £3.96 (AGA) (HD) (4 Disks)

BODYSHOP 8 AGA



Now up to volume 8 the Bodyshop is a collection of the very best Girls in full AGA glory.

Get this now!

for AGA Amigas **only £2.97**

PROFESSIONAL DISK PACK COLLECTION

GET STARTED!

Loads off stuff here to get the beginner or new PD buyer off the ground with his of her Amiga. Learning tools, basic and essential utilities, also some popular programs.

Word Processor
File Manager
Picture Viewer
Basic Tools
Amiga Guide
D.O.S. Guide
and others!

4 Disks WB2+

CATALOGUERS + MENUS

This pack contains a collection of cataloguing utilities and menu systems which will be extremely useful for those users looking to construct their own disk packs, want a HD menu or are thinking of writing a disk mag and want an interface.

Button Menu
HD Click
Lister
Menu Master
Meny Menu System
B Menu
and many other programs

2 Disks WB2+

PRINTER TOOLS

Fed up with your printer? Having trouble with drivers, printouts and the speed of the printout? If so, then this pack could be for you. Loads of tools and utilities for every printer user.

Spoolers
100s of Printer Drivers
Print Managers
Label and Address Printers
much more!

3 Disks WB2+

DISK UTILITIES V2

This is an essential pack for all Amiga owners, Disk copiers, repairers, crunchers, organisers, file management and more.

Here are some of the tools in the pack:

Disk Salv v2.28
Re-Org v2.3
Super Duper v3.1
Filemaster II
Disk Mate v4
Fix Disk v1.2
PP MiniCrunch v1.2
No Errors v1.3
and many others!

2 Disks WB2+

MOST USEFUL UTILITIES V2

This pack contains utilities to improve your workbench in terms of speed, usability and looks. Do you want your Workbench to look like the pictures in Amiga magazines? Well, now you can! Contains:

Tools Daemon v2.1
Magic Workbench Icons
GBlanker v3.30 Screen Blanker
Magic Menu v1.9
ARQ
Magic File Requester
and many others!

2 Disks WB2+

HARD DRIVE TOOLS v2

A three disk collection containing the very best hard disk tools. We have scoured our library, other hard disk compilations and the Aminet to bring you clickable menus, backup programs, file managers, disk lockers, installers and much much more. An essential purchase for all hard disk users.

HD Click v2.60
ABackup v4.06
Superlock
HD Installer v1.04
AF Copy v3.53
MR Backup Pro
HD Mem v1.04
ARestaure v2.03
and many others!

3 Disks WB2+

COMMS CONNECTED

Have you bought a modem lately? Are you looking for some decent comms software? Well, this pack contains some of the best software available. Also includes comms info.

N-Comm v3
Terminus v2.0C
Term v4.1
Mosaic v2.1
Phonebill
Q-Blue
Trapdoor v1.84
Guide to Comms
Guide to the Internet
and more

8 Disks WB2+

PROGRAM CREATING *volume 1*

Do you (or want to) design, make and compile your own file collections, PD packs etc? This pack is ideal for those users as well as PD library owners. The easy way to compile disks, properly!

Commodore's Installer
– *docs*
– *examples on its use*
– *install scripts*
PPGurda etc
Loads of Tips
and more!
How to write Amiga Guides
Loads of Essential Tools
Basic Disk Structure

2 Disks WB2+

COPIERS UNLIMITED

A collection of the finest PD disk copiers for the Amiga. All the best are here, including:

Superduper v3.1
SAFE II
D Copy v3.1
Tetra Copy
MCopy v1.4
and others!

2 Disks WB2+

CRUNCH MANIA

When compiling disks one important tool is the file cruncher, in order to improve disk space. This disk has them all: Crunch files, floppy disks and even expand your hard disk!!

DMS Pro v2.02
LHA Tools
PP Minicrunch v1.2
EPU HD Stakker v1.4
PackIt v1.18
and others!

CRUNCH

2 Disks WB2+

VIRUS EXTERMINATORS v4

We should always be on our guard for new or old computer viruses. This pack contains the very latest in virus killers. They will hide in the background or stay resident in the foreground, checking your memory and disks when inserted. A must!

Virus Checker v6.47
Boot X v5.23B
with latest v2.18 Brain File
Virus Workshop v4.20
Virus Z II v1.11

2 Disks WB2+

ENGINEER'S TOOLKIT

A collection of diagnostics utilities which will examine and test your Amiga and its ports. Very comprehensive fault testers.

Also in this collection are tools to repair certain faults.

An all in one Repair Toolbox!

2 Disks WB2+

RELICS OF DELDRONEYE

This has to be the PD/Licenceware game of the year. Very similar to "Simon the Sorceror" in playability and looks, your objective is to guide a wizard throughout the graphical adventure.

This game has great 64 colour graphics, loads of puzzles and 100 locations.

"Top Stuff! Buy It!"
The One gave it 91%

(4 Disks) (2MB)

F1 Licenceware **only £6.99**

ERIK

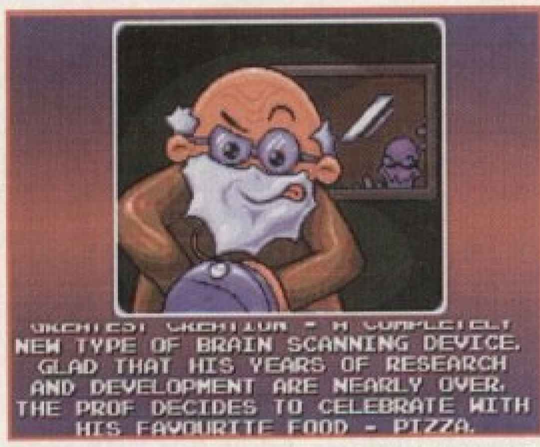
Loads of levels, secret rooms, great graphics all provide a superb commercial quality game. One decent platform game!

Erik boasts great graphics and the sort of gameplay sadly lacking in many commercial releases...look forward to screen after screen of level hopping and baddy-blasting.
Amiga Format, November 1994

F1 Licenceware **only £3.99**

BITS 'N' BOBS

GRAPEVINE 20 NOW OUT (2 Disks)
Bodyshop 6A AGA (2D)
Bodyshop 7 AGA (2D)
Cindy Crawford "The Works" AGA (3D)
Elle McPherson "The Works" AGA (3D)
Girls, Girls, Girls AGA (3D)
Claudia Schiffer "The Works" AGA (3D)
Beach Babes AGA vol. 1
Beach Babes AGA vol. 2
Beach Babes AGA vol. 3
Beach Babes AGA vol. 4
Beach Babes AGA vol. 5
Lingerie Babes AGA vol. 1
Lingerie Babes AGA vol. 2
Lingerie Babes AGA vol. 3
Lingerie Babes AGA vol. 4
Lingerie Babes AGA vol. 5
Lucifer's Book of Shades (2 Disks)



The intro tells you all about how Marvin finds himself in another dimension with only a large deep-pan pepperoni with extra cheese to protect himself with



The first level is packed full of help boxes. Jump on or run into one and you'll be told how to do the next section of the game. Ideal for platform beginners



Marvin's

Moving away from its Pinball series of games, 21st Century Entertainment go platform crazy. Jonathan Maddock grabs his joystick and gets a pizza of the action...

INTRODUCTION

A company which will always be associated with the hugely popular Pinball series of games is 21st Century Entertainment. Pinball Dreams, Fantasies and more recently Illusions have delighted gamers for the past couple of years, but because of their enormous popularity this causes a slight problem for the company.

I'm sure that the Oxon-based software house wouldn't want to be labelled as 'that' company that created the pinball games. No, I'm sure they would rather be known in the future as a damn-fine company that creates some of the best computer games that money can buy.

The first step in this march towards software success is the introduction of Marvin's Marvellous Adventure – a platformer that dares to stray away from the theme of pinball.

GRAPHICS

The first thing you notice about the presentation side of things is just how small everything is. The main sprite is incredibly tiny, but thankfully he is reasonably well animated and jumps and bounces around the screen just as well as any other platform character.

The graphics are all displayed in a wonderful 256 colours via the AGA chipset, although due to the bright colour scheme you sometimes don't realise this fact. The backgrounds are well-drawn in a cutesy/cartoony kind of way and the six layers of scrolling help turn Marvin's Marvellous Adventure into a full-blown console platformer.

If you had to compare this game to anything, you'd have to say that it looks rather like the first couple of Mario games which appeared on the NES, only a lot more colourful.

The animated introduction screens are nicely done and give you a good run-down on what Marvin's adventure is all about. The introduction doesn't feature 256 coloured ray-traced graphics or a pounding atmospheric soundtrack, but you'll soon be skipping past it to start the game anyway.

Graphically, Marvin's doesn't astound you with anything that you haven't seen before. The chunky and brightly coloured graphics will make it appeal to the younger section of the games market.

75%

STORYLINE

After the creation of his latest invention, a fantastic brain scanning device, the old Professor decides to celebrate with his favourite food – pizza. After ordering a large deep-pan pepperoni with extra cheese, the Prof decides to take a short nap before his food arrives.

An evil being called the Dark-One takes his chance to steal an important piece of the brain scanner in order to blackmail the Professor. When Marvin the pizza boy arrives, the professor awakes and goes to answer the door.

Before he gets there, the Dark-One switches on the brain scanner and fires it at the Professor. He disappears, but the ray continues to bounce off the laboratory equipment until it hits the Dark-One.

Marvin, during this time, is getting a little impatient and opens the front door, only to trip over a loose power cable and fall directly into the ray. Marvin goes the same way as the previous two victims of the ray and disappears.

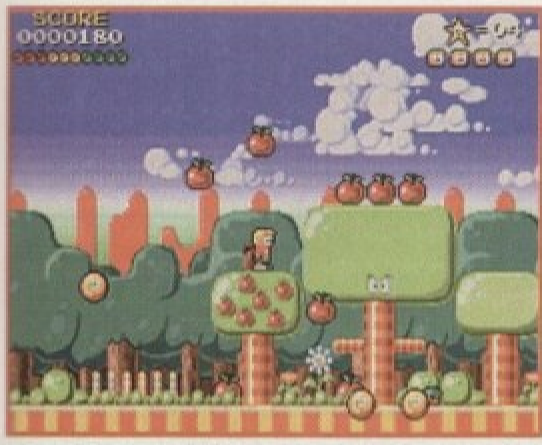
The ray has zapped Marvin into another dimension and it's his job to make his way around many weird locations to find and rescue the Professor. Marvin must also retrieve the missing part from the brain scanner and thus defeat the evil Dark-One.



This special yellow block builds a bridge in front of your eyes, but be careful because it disappears behind you



Some special blocks dotted around the various levels give you a ferocious squad of flying half-moons which eat your enemies. Coo!



Marvin finds one of the highly useful chests which sprays out all manner of wonderful goodies. Watch out for deadly surprises though

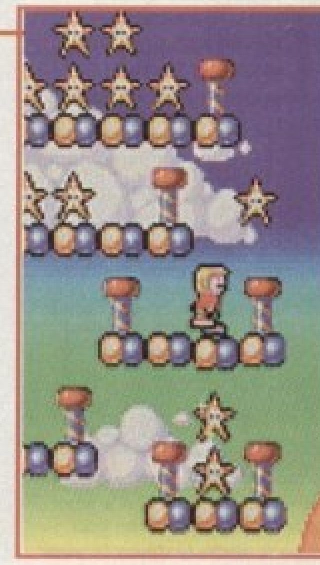


The end of the level and you get a cheesy thumbs up from Marvin while he totals up your score



While on his marvellous adventure, Marvin finds himself plenty of helpful friends. Mr Caterpillar will guide you across the dangerous spikes

Marvellous Adventure


Jump down the well and you'll find yourself in bonus land. Run around collecting the stars and watch your score rise

- **Publisher: 21st Century Entertainment**
- **Developer: In-house**
- **Disks: 4**
- **Price: £29.99**
- **Genre: Platformer**
- **Hard disk install: Yes**
- **Control system: Joystick**
- **Supports: A1200/4000, CD32**
- **Recommended: 68020**

SOUND

Hmm, I have a problem with the tunes in Marvin's Marvellous Adventure. If you own a A1200 then you get an array of second-rate, heard it all before, cheesy musical offerings – basically, the sort of tunes that you thought had died a long time ago.

If, however, you're the proud owner of a CD32 then you get a cracking tune that helps make the game flow around at a rather nifty pace. It's all very Whigfield, but at least it's got a quality bass-riddled drumbeat thumping in your ears as you hop over platform after platform.

The rest of the sound, in both the CD and A1200 versions, is virtually the same, with a smattering of tings, bings and bleeps in all the right places. CD owners get the extra sound of a 'Bill and Ted' guitar riff whenever they complete one of the levels. A tale of two games. The A1200 version gets a thumbs down and is ordered back to music school, while its CD counterpart gets a thumbs up and is promoted to top of the class

70%

OPINION

60%

With it's chunky and bright graphics, you may be thinking that Marvin's Marvellous Adventure is aimed at the younger end of the games market. It is, in a way, but with it's 60 huge levels Marvin's will be a tough task to complete, even for the most platform-hardened games-player.

The various levels feature a host of puzzles and sub-games which start off relatively easy and get progressively harder and harder. Most players will have to be fairly proficient with their joysticks as the game contains a lot of jumping, most of which has to be spot-on otherwise you'll lose one of your precious lives.

There are some nice touches in 21st Century Entertainment's platformer, like the help boxes which contain either a helpful piece of information about the level or a highly useful passcode.

One of Marvin's biggest problems is that it gets quite boring after a while. There doesn't seem to be anything in the game to excite and make your platform-thumping heart race.

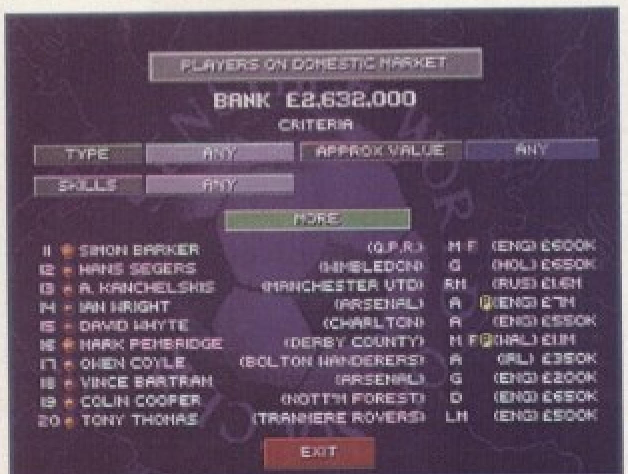
These are the days where platformers are abundant in the software charts, each and every new addition simply has to have something that sets it apart from the rest to make it succeed.

Marvin's Marvellous Adventure doesn't have that vital something, which is a shame in a way because it has got some very good points. I guess if you're a platform addict then you might fancy 21st Century Entertainment's latest offering, but other gamers might want to steer clear.

It was a big and brave step away from the highly successful three pinball games and although Marvin's isn't going to be that successful, I'm sure it won't be long before 21st Century Entertainment is back invading the charts with something else.

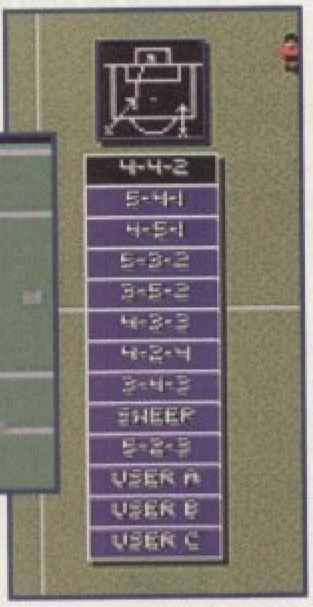
AMIGA COMPUTING BRONZE AWARD

Sensible Soccer



The transfer is a fantastic feature and enables you to buy some quality players. Andre Kanchelskis for only 1.6 million. A bargain!





The tactics system takes a while to set-up, but at least it's easy to use. Which formation you choose is entirely down to your skill at reading the game

There are plenty of new formations to try in SWOS. The user-definable ones can come in very handy if you need to hold on to a one-goal advantage



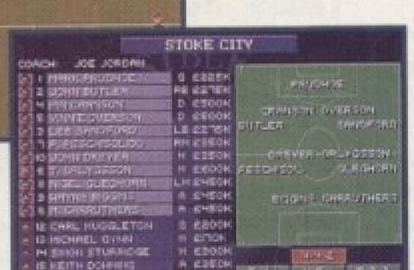
At any point during the game you can have a look at any club in the world.



I know this doesn't look much different to the original game, but wait until we move away from the centre circle



See, they have made some graphical improvements. You now get a stadium around the sides of the pitch and a set of fans dressed in their appropriate colours



I'm the manager of Stoke City and we're about to take on the might of Burnley.

If you had the option or only had the money to buy one Amiga game per year, which product would you choose out of all the releases we had in 1994?

Titles like Body Blows Galactic, Simon the Sorceror, Theme Park, Super Stardust, Dreamweb, Premier Manager 3, Zeewolf, Ruff 'n' Tumble, Alien Breed Tower Assault and Pinball Illusions have all become classics in their own right, but there is one game that you've had to wait until December for.

It's name you know already, after all, you've been dreaming sweet dreams about it every night since you heard about it's release date.

Sensible Soccer is, undoubtedly, the world's most popular Amiga game ever created. Over the last couple of years it's been slowly

INTRODUCTION

fine-tuned via releases such as Sensible Soccer Version 1.1 and Sensible Soccer International Edition.

A sequel has now arrived, but you have to ask yourself why? How can Sensible Software possibly make a game better than the original? Answers to those questions aren't required because Sensible World of Soccer (or SWOS to those in the know), as incredible as it sounds, is Sensible Software's best product yet.

For those gamers new to this computer soccer lark then welcome to the exciting world of Sensible Soccer. For seasoned Sensible Soccer professionals, your 'game' has just been changed for the better and you won't be able to put your joystick down to stop playing it.

ADDITIONAL INFO

As you may or may not know, Sensible World of Soccer has got a brand spanking new management angle to it. Now there is a whole new perspective to it which lifts it above just about every other Amiga football game.

You can play the game as either a manager or a player manager. The manager option allows you to make decisions on the team, tactics, transfers and the overall running of the club. The player manager option let's you do exactly the same, but it's entirely down to your playing skills whether you win, lose or draw your matches.

You have the option of playing just one season where you compete in the league and cup competitions, or you can choose the career option. This allows you to play many seasons and depending on your success will let you play in more impressive European cup tournaments. In this mode you can also get sacked and then move to another club and start all over again. Ultimately, this means you can play one game of SWOS for months and months.

The management system is almost as comprehensive as the ones found in Championship and Premier Manager. Transfers cover every single club in the world, so you might find yourself bidding for the talents of Alan Shearer or maybe you could find a cheap, but highly skilful player from overseas.

This doesn't mean that you can simply buy a squad full of super stars because your financial situation won't allow you to do it. You could buy a player for a few million quid, but his weekly wage bid is sure to bring your club to its knees.

SWOS also has a new tactics system. Instead of just picking the one formation, you can user-define your own. You can pack the defence with every single player except the lone striker or you could play a couple of marauding wingers, the choice is entirely up to you.

The tactics do take a fair while to set-up, but it's worth persevering with because your results will noticeably improve the more you fine-tune your team. Thankfully, the whole tactics system is easy to control via a few short movements with the joystick. The whole management system is by no means as in-depth as Tactical or Premier Manager, but that's a good thing as you don't spend too much time messing about and can concentrate on playing in some damn fine matches.

The beauty about this new look to Sensible Soccer is that no matter how many times you spend alone in your bedroom struggling to get your team to win trophies and championships, you can still whack a two-player friendly on when you play one of your chums and have the time of your life (err, as far as playing games goes that is).

GRAPHICS

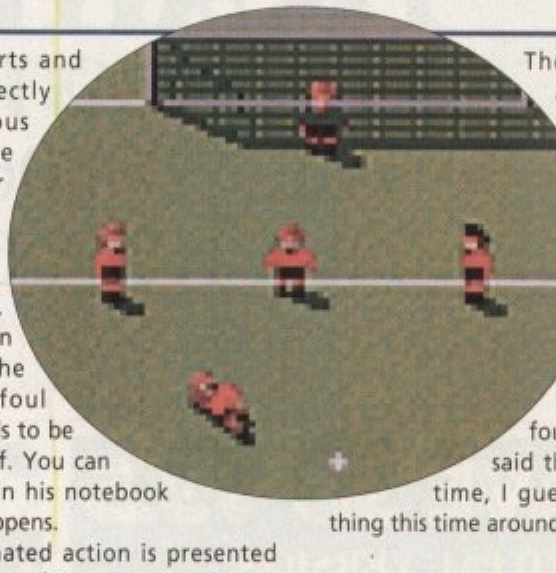
Not a lot has changed on the pixel and sprite front, but that's mainly because there wasn't much wrong with the graphics in the original game.

The new additions are all fairly superficial, but they still help enhance Sensible Soccer even further towards the title of 'Best Soccer Game in the World Ever.' When playing an actual match you're presented with a stadium packed full of fans, each decked out in their teams colours. Policeman and press photographers now line up around the sidelines and the screen comes complete with a spinning Sensible Software 'S' in the top right-hand corner.

There are over 1500 teams in this new version, so you could say that there has been a graphical enhancement in the amount of football kits. All of the various shirts, shorts and socks have been perfectly matched to the various teams, whether they be from the English Premier or from the Nigerian Second Division.

The match sequences now feature a referee. The balding one is not on the pitch all the time, he only appears when a foul occurs and someone needs to be either booked or sent off. You can now see him scribbling in his notebook when the said offence happens.

Another slice of animated action is presented when you viciously foul one of the opposing players.



The injured player then rolls around on the floor in pain clutching his leg. OK, so you're not going to jump for joy about these little touches but they do improve the game, although some gamers might claim that it doesn't need improving.

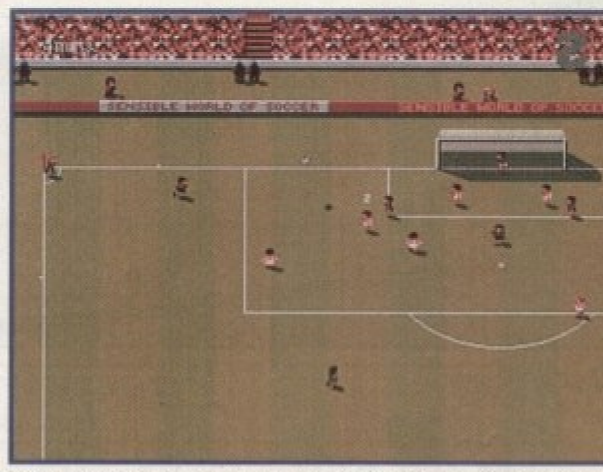
The graphics are virtually the same as the ones found in the original and as we said they were rather splendid last time, I guess we have to say the same thing this time around.

80%

World of

- **Publisher: Renegade**
- **Developer: Sensible Software**
- **Disks: 2**
- **Price: £29.99**
- **Genre: Sports sim**
- **Hard disk install: No**
- **Control system: Joystick**
- **Supports: A500/600/1200/4000**
- **Recommended: 680000**

It's here! It's here! It's here! Some have claimed that this is the best Amiga game of all-time. Jonathan Maddock is in firm agreement as he lusts over Sensible's sequel



See, they have made some graphical improvements. You now get a stadium around the sides of the pitch and a set of fans dressed in their appropriate colours

Win a Limited Edition SWOS shirt!

Thanks to those kind people at Renegade, we've got five limited edition Sensible World of Soccer football shirts to give away. To win one of these exclusive and highly stylish long-sleeve tops, all you have to do is answer the three footy-related questions correctly and send your entry to the following address.

Q1 *What is Manchester United's world famous stadium called?*

Q2 *Name Aston Villa's recently departed manager?*

Q3 *Who scored England's winning goal in the recent match against Nigeria?*

Sensible Soccer Shirt Compo
Amiga Computing, IDG Media
Media House, Adlington Park
Macclesfield SK10 4NP

● *All entries must be received by 12th January 1994.*

SOUND

Err, there are a few more splendid crowd chants to give the game that extra bit of atmosphere, but apart from that there isn't much to listen to on the sound front. Besides, there are far more interesting things to read about, so make your way to the additional information box. Ta!

70%

OPINION **93%**

This could be a blasphemous thing to say, but I have always been a bit of a Goal fan simply because I thought it was a far better football game. Since then I have played whole Sensible Soccer Tournaments and had a lot of fun and a lot of laughs in the process, but only because I was playing with friends.

I still think it has some faults, which I won't name because people will say I'm just being petty, but SWOS in my eyes is a major improvement over the original game.

I previously believed that Sensible Soccer was only good for two players, but thanks to SWOS it lends itself more towards becoming an almost perfect one-player game. The interaction between the tactics and the transfers is just brilliant and in my mind SWOS is the world's first football game that has managed to get a perfect balance between a pure arcade game and a management simulation.

I had my reservations about yet another episode of Sensible Soccer, but I've had those firmly destroyed because SWOS, quite simply, is the best Amiga game that money can buy. I could go on forever heaping praise upon the game, but I haven't got the time or the space, so I'll leave you to put this magazine down and let you toddle off down to the shops to buy it.

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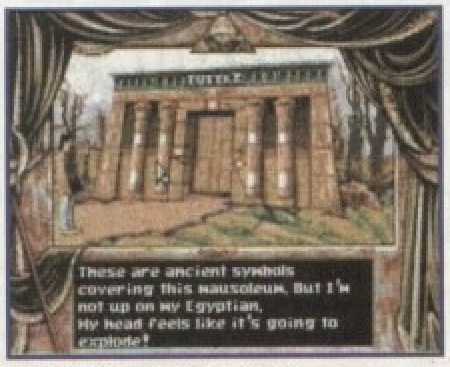
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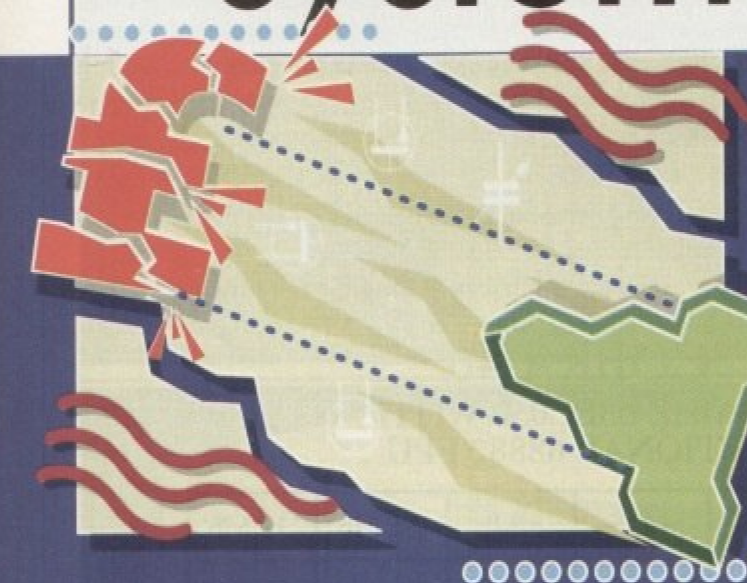


Moving into the house from Psycho is not generally recommended.



Prepare for a tasteful session of grave-robbing.

system essentials



This month Gareth Lofthouse faces a chilling plot in the CD32 conversion of Dark Seed and, as if that wasn't enough, he then has to handle the airborne dangers of Microprose's latest budget Sim.

Dark Seed

A reviewer's life can be tough. This week I've been plagued by disturbing nightmares, throbbing headaches, interference from parallel dimensions, alien brain implants and the threat of world domination by eldritch forces.

No, I have not imbibed a bucket load of hallucinogenic drugs. These terrors must be faced by anyone who plays Dark Seed, now released on the CD32 so that console owners can get the willies too. A point and click animated adventure, Dark Seed has a storyline that combines elements from H. P. Lovecraft horror novels and the Alien films. As Mike Dawson, a writer whose dress sense seems to be stuck in the 70s, you find that your newly bought house holds some dark secrets.

When you discover that your house contains an inter-dimensional doorway, it becomes apparent that an ancient civilisation is hatching dark plots on the 'other side.'

A trail of clues found in the library and the cemetary eventually lead you to cross into an alternative reality with landscapes inspired by the artwork of H. R. Giger.

The plot and the look of the game work well to create a foreboding atmosphere, and the desire to see the other dimension provides an incentive for problem solving.

Unfortunately, the game-play doesn't live up to the suspenseful setting. The puzzles are often irritating, relying on meticulous room-searching and luck more than on logic. There's also a lot of tedious plodding about from location to location, a problem exacerbated by slow-paced animation.

There's not a lot going on, with relatively little interaction with other characters, not enough movement in the scenes and a style of play reminiscent of hide and seek.

The voice-over will, as usual, bring a mixed reaction, but at least the narrator doesn't keep repeating himself, a problem which marrs Simon the Sorceror. Musically, it's not too bad either. Dark Seed did keep me plugging away for some time because it has an intriguing idea behind it. Unfortunately, while I was persevering the game was moving too slowly and unsatisfyingly to make my progress as enjoyable as it could have been.

- Publisher: Cyberdreams
- Developer: Cyberdreams
- Disks 1
- Price: £29.99
- Genre: Graphic adventure
- Hard disk install: N/A
- Control system: Control Pad
- Supports: CD32
- Recommended: N/A

70%

F-117A Stealth Fighter

- Publisher: Microsoft
- Developer: Microsoft
- Disks: 3
- Price: £16.99
- Genre: Flight sim
- Hard disk install: Yes
- Control system: Keyboard/Joystick
- Supports: Most Amigas
- Recommended: 68020

A game with a title like F-117A emblazoned in huge lettering across the cover can't be anything but a Sim with a very serious approach. This one's got to be about as realistic as software can be when it's based on a plane enshrouded in secrecy.

The 3D graphics are of a high if not exceptional quality, with enough ground detail to give a proper impression of motion. The game does look different to the host of other Sims thanks to the fact that you are flying night missions.

Good audio effects include a beligerent introductory soundtrack, thunderous cannon-fire and cockpit atmospherics such as an incoming missile warning. Strangely, though, on the basis of this Sim the state-of-the-art fighter has engines that sound like washing machines. Microsoft standards such as visually appealing briefings, career incentives and medals for the pilots, and huge arsenals of weaponary are all present, absorbing players in a comprehensively authentic experience.

Be warned, however: Even the hardened Amiga pilot may find the control key guide overwhelming. I counted 59 functions that are activated via the keyboard, and while many are not often needed, new players can become confused.



Prepare for take-off! No pretty air-hostesses here, though.

The missions will have you flying into the heart of the world's hot spots, with updated scenarios and historically-based assignments from the Gulf War maintaining that general sense of realism.

A good manual is vital for a game of this complexity, but then Microsoft has been doing this well for years. There are introductory tutorials to get you into the swing of things, followed by operational instructions and armament specifications.

It's a game that's so realistic that I found it took a long time to become enthusiastically involved. Nevertheless, there's a niche of hard-core Sim pilots out there who should lap it up.

75%

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AMIGA GUIDE

An essential aid for the enthusiast, our monthly advice section returns to help you take your Amiga to its limits















Ask the

This month I thought everyone might like to have a handy reference guide to all those questions that seem to get answered every month in the letters pages of all Amiga magazines. No more having to search through back issues of Amiga Computing or any of your other, lesser magazines, I'm going to try to get all the answers to those perennial questions onto these two pages.

RAM disk icon

OK. Well, this one's easy. The first thing you have to realise is that every time you reboot you lose the contents of your RAM disk. Yes, everything must go! This means that it is no use drawing a nice icon for your RAM disk if it gets wiped out each time you boot.

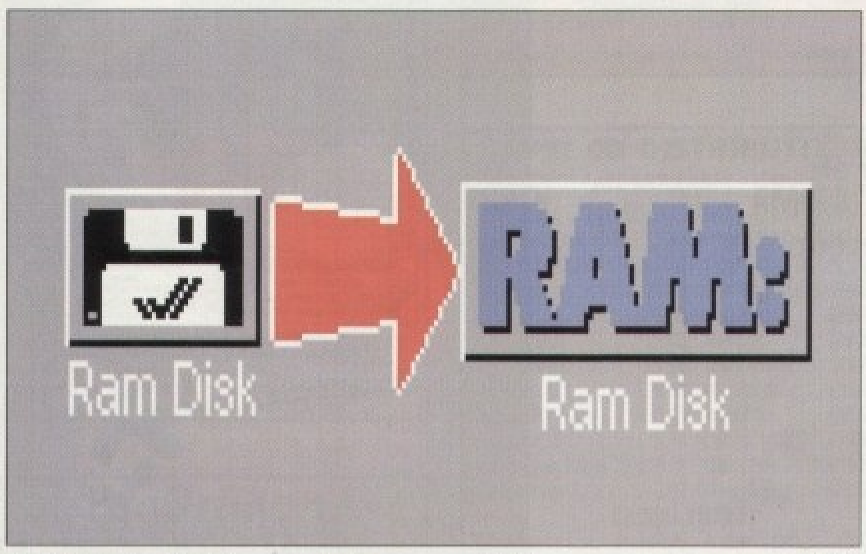
The solution is simple. Make your nice icon in IconEdit (making sure that you save it as a Disk icon). If you have just saved over your RAM:Disk.info file, then use DOpus or the Shell or whatever to copy that file to the S: directory on your boot disk.

Next, you should edit your S:user-startup file and put the following line at the start of the file:

```
Copy S:Disk.info RAM:
```

If you want to make sure you remember what the icon is called (rather than just Disk.info), you can always rename it to something like 'RamDisk.Icon.' If you choose to do this, your line in User-startup will need to read:

```
Copy S:RamDisk.icon Ram:Disk.info
```



With just a few short commands we can completely renew your appearance. Voilà!

Printers

Printers seem to cause an awful lot of problems. People don't understand what a printer driver is or how to get one for their printer and so on and so forth.

Now, nobody ever said that printing from an Amiga was easy, but it certainly isn't the mammoth task everyone seems to assume it is. In your DEVS: drawer you have a directory called Printers. In this drawer, your printer drivers reside. When you load the Prefs program Printer it checks this directory to present the list of printers available for use.

By the way, you can safely delete all the printer drivers you are not currently using happy in the knowledge that you still have your original disks to get the necessary driver from when you upgrade your printer.

If you can't find your printer in the list or on your original disks, then try EpsonX if you've got a 9-pin dot matrix printer, EpsonQ if you've got a 24- (or 48-) pin dot matrix or an inkjet, and Postscript or HPlaserjet if you have a laser printer. You can also try giving the printers manufacturer a ring and asking them if they produce a driver specifically for the Amiga.

However, the easiest way to get the best possible results from whatever printer you've bought is to buy a copy of Studio Printer Software, written by Wolf Faust. It's readily available from JAM on 0895 274449 and is absolutely superb. It covers practically every single printer currently doing the rounds and is a great improvement on the standard Workbench way of printing.

Keymaps

If you are constantly getting @ symbols instead of " when you hit Shift 2 you've got the wrong keyboard map selected. With Workbench 2.1 and above, changing your keymap is down to using the Input preferences program.

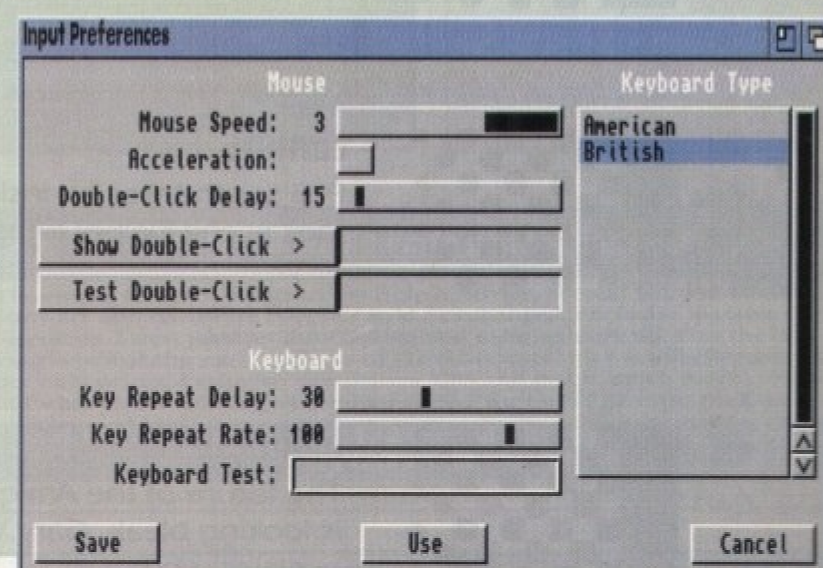
A list of keymaps should appear on the right-hand side of the window in a scrollable list. If 'American' is the only title that appears in this list, you will need to get your Storage disk out (the one that came with Workbench 3.0) or your Extras 2.1 disk if you are using Workbench 2.1. In either case, you should be able to find a drawer called, surprisingly enough, Keymaps.

In this drawer there should be a whole bunch of icons with filenames like d, f, po and gb. Simply drag the one labelled gb into your DEVS:keymaps/ drawer. If you don't want to reboot, double-click the icon when it is in the appropriate drawer, and then go and check Input Prefs again. If you have a whole bunch of keymaps in your DEVS:Keymaps drawer (and you don't spend a lot of time speaking or typing in foreign languages), you can quite happily get rid of all bar the gb icon, safe in the knowledge that, in case you really need them, they will be on your original Workbench disks.

If you are using Workbench 2.04 or 2.05. The method for changing your keymap is slightly different. The easiest way I've found is to run a script that comes on your original Workbench disk called Pickmap. Pickmap can be used like this:

```
Execute ?:s/pickmap
```

where ? is the name of your original Workbench disk or the drive it is in, ie. df0: or Workbench2.0:



Now where did my Ogham, Kanji and Thai keymaps go?

Formatting and use of PC disks

With the world and his wife using PCs at work and at home these days, it would be nice to be able to transfer data with them from your Amiga. Workbench versions from 2.1 come with drivers to enable you to format, read and write to PC disks. That's not to say that you'll be able to use PC programs, you'll just have access to data. If you've got a graphics card you will probably be able to play back PC animations in FLI or FLC format, and you should be able to view PC pictures on most Amigas in some form or other. You will also be able to take ASCII text files, Postscript fonts and EPS clip art.

Reading and writing to pre-formatted PC disks is easy. All you need is the PC0 or PC1 driver in your DEVS:DOSDrivers drawer when you boot. Then when you insert a PC-formatted disk you will get a normal

e expert

Sit back, put your feet up and read all the solutions you'll ever need to those niggling little problems you encounter with your Amiga. Frank Nord plays host

Aliases

If you use the Shell a fair amount, you soon come to the conclusion that having to type ENDCLI or ED S:STARTUP-SEQUENCE all the time is a bit of a fag. Editing the Shell-startup file in your S: directory can make using the Shell a lot more pleasureable. In a Shell window type:

```
Ed S:Shell-startup
```

and you should see a few Aliases already in there for things like XCopy (a version of Copy that clones files locally). You can add new lines in there for things like delete, endcli or editing the startup-sequence – here are some I've prepared earlier:

```
alias del delete
alias new newshell
alias q endcli
alias edss ed s:startup-sequence
alias edus ed s:user-startup
```

Once you've added all your new aliases to the Shell-Startup file, you will have to close your current Shell window before you can use the new aliases as Shell-Startup only gets called when a new Shell window is opened.

Programming Information

If you are trying to write programs on your Amiga for any purpose it is a really good idea to write to Commodore for the Native Developer Kit which costs a paltry £23 and contains a wealth of programming information.

Write to: Sharon McGuffie, Commodore Business Machines UK Ltd, Commodore House, The Switchback, Gardner Road, Maidenhead, Berks SL6 7XA

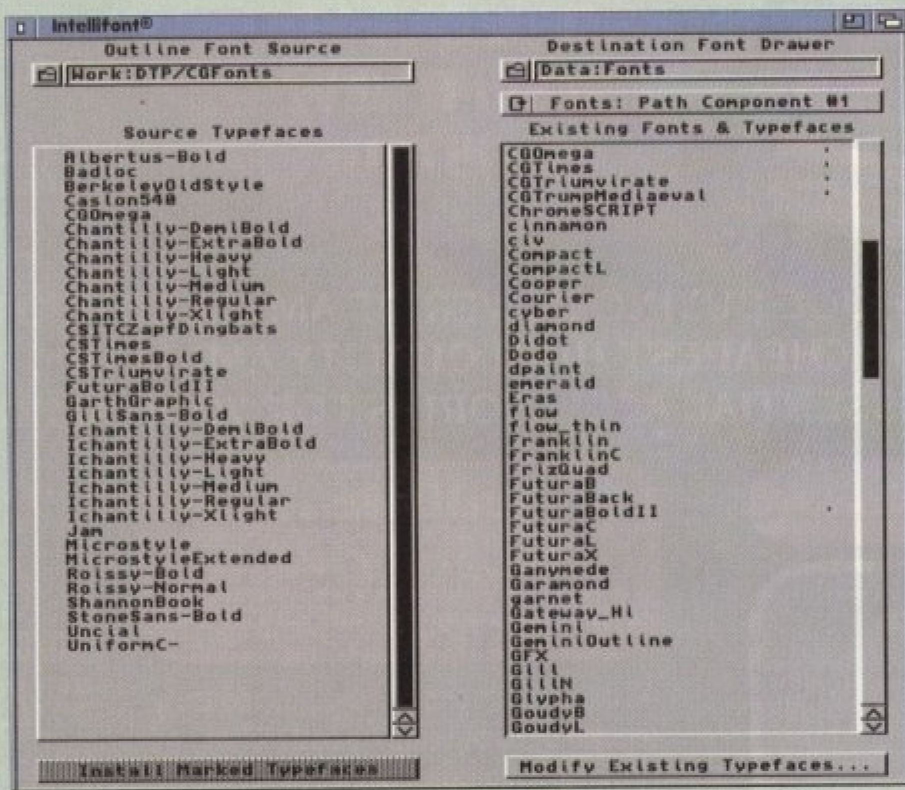
Which fonts?

The Amiga's choice of font usage can seem bewildering at times. You use Postscript type 1 fonts for PageStream or LightWave, Pro Page uses CGFonts, Workbench also uses CGFonts but, needless to say, they are of a different kind, and Final Writer uses NimbusQ fonts, which are like Postscript fonts but just different enough to make them completely incompatible.

But hang on there, Workbench can use the sort of CGFonts that Pro Page uses, it just takes a little effort. Load Intellifont if you're using Workbench 3 or Fountain if you are using 2.04 or 2.1, and you will see an open window with two lists in it.

One is your current font directory, but the other will be empty. This list is where fonts that haven't yet been installed to your FONTS: drawer will show up. If these fonts are in the correct format for Workbench, you needn't bother with Intellifont, just copy them across using DOpus.

If, however, you are a Pro Page user and want to have CG Trump Medieval for your Workbench screen font, what you should do is click on the little folder icon in the top-left corner of Intellifont's window. This will bring up a file requester. Choose your CGFonts: directory but don't be alarmed when nothing shows in the requester – just hit OK and the fonts will all appear in the left-hand list. Click on the ones you wish to install, hit the 'Install Marked Typefaces' button and in a few seconds you will have CGTrump Medieval on your Workbench.



Hmm, just what I need, even more fonts

Amiga Medical Part 2



Amiga disk icon with question marks under it, but you will also get another disk icon, sometimes with a CrossDOS logo on it, with the name of the PC disk under it.

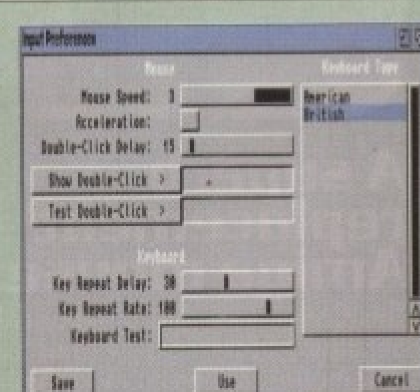
Simply use this as you would any other disk but remember that owing to Microsft's archaic operating system, your file names will need to only be eight characters long, with a three character extension for file type, ie. THISFILE.TXT. Also, don't bother putting your icons on the disk as PC owners won't be able to use them.

Formatting a PC disk on your Amiga is slightly more difficult. As you probably know, bunging an unformatted floppy in your drive, clicking on it once and selecting Format from the Icons menu on Workbench will bring up a window asking you how you want to format the disk.

Unfortunately, the options presented don't include MS-DOS, only Amiga formats. To format a PC disk on your Amiga don't bother clicking on the icon but go into your boot disk's System drawer and double-click on the Format program icon. This will bring up a window with a list of all the available drives to be formatted including PC0:.

Simply click on the PC0: item and you'll be presented with the familiar Format window for further options. I haven't the foggiest notion why Commodore have put an option for the user to put a trashcan on a PC disk where it can't be used, but there you go.

The last thing to remember is that if you get given High Density floppies and your Amiga doesn't have a High Density drive, you will be formatting the floppies as low density. This won't cause problems on your machine, but the PC will be expecting a High Density disk to be formatted to High Density rather than Low Density, and will probably throw a wobbler. The solution is either not to use High Density disks, or to tape over the High Density notch.

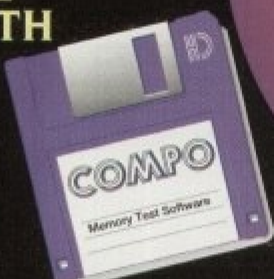


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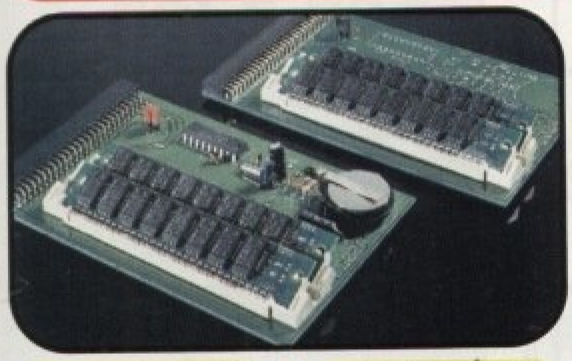
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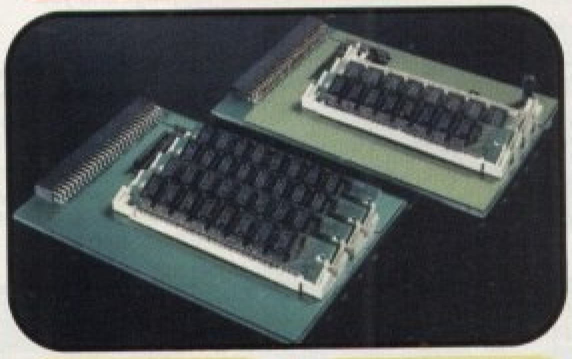
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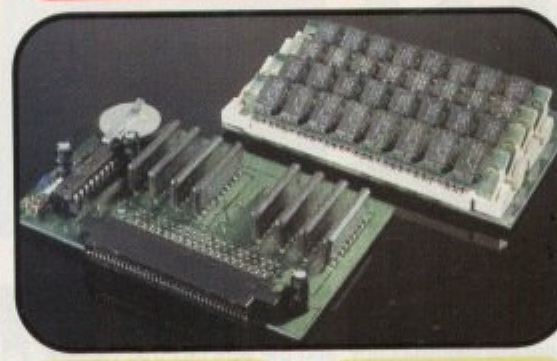
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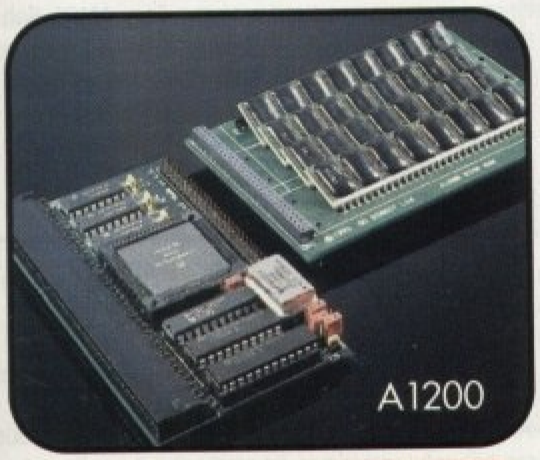
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Nice and

Welcome to the first instalment of your guide to Easy AMOS. What is it? How is it different to AMOS? And what can you do with it?

Easy AMOS is just like Amos only less so. Rather than confuse the hell out of people by subjecting them to the full blown Amos all at once, it was decided for reasons which will become apparent if you've tried and failed to use Amos, that an easier path to Amos perfection was needed.

Learning any computer language is a bit of an uphill struggle, especially if you, unlike me, had a training in Basic from a very young age. I was coding in Basic as early as 1977, so before the Amiga even came along, I knew which button to press to write my first programs in Amos.

But what if you are a complete beginner in Amos? Is it likely that you will even know what a sub-routine is, let alone know how to code one? Not really. So this is why it became essential for new users to have a middle road, a way to learn how to code and see what was happening in a way which was meaningful even to the complete programming neophyte.

Easy AMOS was produced to fill that need, and it's a cinch that it fulfilled that need quite nicely for a long enough time. Now you have it, or at least you should do if you got last month's copy, and the very fact that you are reading this page means you have an interest in knowing how to code using Easy AMOS.

Let's start this month by looking at a little bit of history. When Amos was originally released, people began to realise this wasn't just any ordinary language for writing arcade games, although this was made easier with Amos. It was a very complex and powerful language and you can do just about anything with it.

But the power of the language was its biggest problem too. Some people found it a little hard to get into. Amos is actually simple to learn but hard to apply unless you can get a little leg up on the learning curve, and that was when the idea of a tutorial occurred to the writers of Amos. This idea grew into Easy AMOS.

Easy AMOS is a cheap and very useful first step into the world of Amos, with many features that you can use in future when (or if) you upgrade to a full version of the program such as AMOS Professional.

The idea behind Easy AMOS is that new users can get a start on Amos without a lot of the very heavy technical details getting in the way. Easy AMOS isn't just a cut-down version, although it does have about 300 fewer commands. It's main objective is not to be smaller, but easier.

The point of the package is to be a sort of living tutorial for programming Amos, and to help you there are more accessories than before.

The most obvious changes are purely cosmetic, as this version of the program is designed to appeal to a slightly different audience. The Amos Editor has changed quite a lot, and it looks a lot more like Workbench 2.0 than Amos, which has a distinctly Workbench 1.3 feeling to it.

The most major omission compared with regular Amos is the exclusion of AMAL, one of the most complex tools in Amos. I was never much of a fan of AMAL anyway, but it can be useful sometimes. I'd gladly give it up, though, for the inclusion of Easy AMOS Tutor, which is the most advanced programming tutor available.

The Tutor features three windows: one for your Amos code, one for variables and expressions with their values, and finally a window with your program output. The programs execute line by line, so you can see all the program's effects while it's running, meaning not only can you trap bugs but you can also see how your program works.

CHECK

The Tutor can run at different speeds, so you can slow it down to see all the program elements in detail, or speed it up to pretty much real time to check the program looks good at full tilt.

The examples on the programming samples disk are many and varied, covering all sorts of useful utilities coded in Amos to show how it copes with programming so-called 'proper' programs. One of the prime examples of this is a program called Amos Disk, which is a sort of disk utility clone like Directory Opus.

A lot of other utils are bolted onto the main system, rather than being separate Amos programs, so the bob editor (as there are no sprites in Easy AMOS either just to save time and space) is in fact a menu item rather than a program you have to load and run.

Another option which Easy AMOS has in common with



Easy Amos provides you with a wealth of powerful commands to help you create great software



Bobs are an essential part of a successful game and Easy Amos' built-in Bobs editor makes designing them a breeze

Bob a job

As I told you just now, the sprites have been dropped in Easy AMOS to make the program easier to get a grip on. Like most reasons for changes in the Easy AMOS environment, the change is for ease of understanding rather than ease of use!

The original sprite editor by Aaron Fothergill has long since passed away and been replaced by SpriteX and more recently version 2. When the original editor was released people complained it was a little bit buggy. There's no pleasing some folk.

Aaron was writing the sprite program at the same time that Francois Lionet was writing Amos, so this was more than likely the cause of some of these bugs. More than a few revisions later the program was expected to work, and all credit to Aaron it did, but not nearly as well as it should. All the suggestions for the new sprite editor were incorporated into the Easy AMOS Bob Editor.

Although not as good as SpriteX (particularly the new version 2, but then what is?) the Bob Editor is definitely one of the easier movable object editors around. The buttons are big and have very descriptive pictures on them, and the program couldn't really be easier to use.

Cut it, print it

Due to considerations of ease of use, rather than space, a lot of commands have been withdrawn from Easy AMOS, and this is to prevent the user being distracted from the already tricky task of learning Amos.

Some of the more technical commands have been shed, and as I said before, AMAL has been axed too. Most of the changes I agree with, but a few are a bit mystifying. For example all the joystick commands, like =JUP, =JDOWN, =JRIGHT, and =JLEFT have been removed - all except the =JOY command. The extremely useful reserved variables Screen Height and Screen Width have been dropped. Why?

Users who've dabbled in Amos a bit might like to know that Aaron Fothergill has come up with a routine to compensate for the lack of these screen commands, namely:

```
SCRW=Deek(Screen Base+76)
SCRH=Deek(Screen Base+78)
```

so you can do these commands instead.

The lack of AMAL is really more than compensated for by the fact that you can compile Easy AMOS programs - provided you have the Amos Compiler program and extension, which has in the recent past been given away on the cover of magazines, etc.

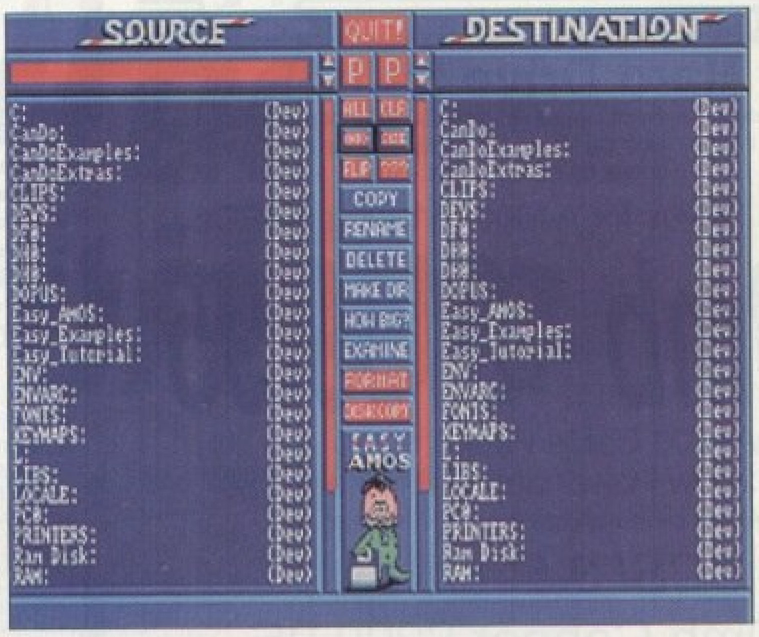
Amos is in itself an easy approach to programming, so something which makes the learning curve that much shallower is only to be welcomed with open arms. This is one of the first times that a language has been used to create a program, Tutor, which teaches people how to use the program itself, and it's a very well-designed piece of Computer Aided Teaching as well. If you want to learn AMOS fast then this is the way to do it.

Join us next month for a few tutorials on how to use the various elements of the program and get the best out of Easy AMOS. Bye for now.

easy



To track down those elusive bugs and program errors, Easy Amos provides you with a debugging utility called Tutor to help make the process much easier



To keep your program projects and files organised and tidy, there's even a useful disk and file manager utility available from within Easy Amos

later versions of classic AMOS is the ability to load Soundtracker and Noisetracker type tunes, using the TrackLoad command.

Of more interest still is another program to be included in the package, a sort of progress tester. This is an Amos program which plays a kind of interactive quiz to see how well you are doing in your quest to learn Amos. By asking you questions and logging your answers, you can see how much you are taking in about Amos. If you pass a certain stage you get a diploma on screen. (Oh dear... sorry did you say something?) This is another bit of trendy design for the younger user, and is sure to go down well with them.



After a little practice, you'll soon be creating your own software. It may even become an all-time classic like this particular game



In this first episode of a new three-part series, Phil South looks at Easy AMOS, and the ways it can change your life. Or perhaps not

Converting from other versions of Amos

Almost all the programs you see in books on Amos and in the Amos column in this magazine are usable in Easy AMOS. The only things you have to take into account are the fact that:

1. There is no AMAL.
2. There are no sprites.

These are not really very difficult problems, which you will find out when you get a little better at programming in AMOS, for a couple of reasons.

Firstly, most coders avoid AMAL and try to do programs which can be coded and compiled for speed. In the same way, coders avoid the use of PROCs because although they are a nice idea, it's much easier to keep control of a program if you use proper flow control, as in sub-routines rather than PROCs. A PROC looks like this:

```
Rem *** a PROC based program ***

Do
 BOBBINS
Loop

Procedure BOBBINS
 [code]
EndProc
```

and a program with sub-routines looks like this:

```
Do
Gosub BOBBINS
Loop

BOBBINS:
      [code]
Return
```

so there's not a lot of difference when you get right down to it. It just compiles better and is a more traditional way of putting a program together. Secondly, most people use Bobs rather than Sprites anyway, and this means that most programs will convert relatively easily. The best way to learn is to have lots of examples and adapt the programs you type in for your own purposes, because only when you understand how something works can you really make it work for you.

Once you grasp the underlying principles of Amos you can create your own programs based on the work of others. This isn't cheating, it's 'homage.' (If you believe that you'll believe anything.) The best place to get programs to type in are in magazines and in books.

There are some excellent books on Amos that have some good programs in, and I hate to say it but some of these are actually my own. There's 'Mastering Amiga AMOS' (Bruce Smith Books), currently in it's second edition, plus the excellent 'Amiga Game Maker's Manual' by Stephen Hill (Sigma Press), and Len and Anne Tuckers's great 'AMOS In Action' (Kuma). In these you'll find all you need to know to help you gain the most out of Amos.

Write stuff

If you have an AMOS question, or a routine you'd like to share with the world, then please write to Phil South,

Amos Column, Amiga Computing, Media House, Adlington Park, Macclesfield SK10 4NP.

Perfect intuition

AREXX



Paul Overaa takes a look at the rx_intui library's event collection function

Last month's column included some example code that used the rx_intui library's WaitMsg() function to drive an IDCMP (Intuition Direct Communications Message Port) event loop. This month I thought I'd look at the WaitMsg() function in a little more detail to illustrate just how useful this routine is.

Intuition event collection often seems a difficult topic when first encountered (especially so with languages like C or 680x0 assembler) but the underlying ideas are quite easy to understand. For the ARexx coder, the rx_intui library's WaitMsg() function makes the whole process simple because this function not only collects the messages that arrive at your window but it puts the various pieces of information into a form that an ARexx script can use directly.

The basic scenario therefore goes like this: Firstly, your program tells Intuition what sorts of messages it wants to receive. Having done that it enters a loop which uses WaitMsg() to collect and deal with all incoming messages. This event-handling process continues until such time as some chosen loop exit condition is satisfied (the reception of a CLOSEWINDOW message for instance) and at this point the event collection loop terminates.

The value returned by WaitMsg() is an ARexx argstring which consists of four fields. You can use the ARexx PARSE command to place these fields into separate variables, so the inside of an event collection loop will usually start something like this:

```
message=WaitMsg(window)
parse var message field1 field2 field3 field4
```

The first field, which I've actually called field1 in the above fragment, provides the message class, in other words it tells you what type of message was received. For example, if you arrange to use some menus, when the user selects a menu item (or a sub-item), you will then receive a WaitMsg() return value whose first field is the value two for MENUPICK.

If the user clicked the right mouse (SELECT) button, the returned class would be three for MOUSE-BUTTON. The other three fields have different meanings depending upon what the class is (see table 1 for some brief details).

```
/*  rx_intui library function test */
if ~Show('L','rx_intui.library')
        then call AddLib('rx_intui.library',0,-30,0)
window=GetWindow(,,,,,,,512+4194304,) /* open window on Workbench screen */
if~(window=='') then
        do
                x=20; y=40; seconds=0
                call SetTime(window,10)
                field1=1 /* force entry into loop */
                do while field1>0
                        message=WaitMsg(window)
                        parse var message field1 field2 field3 field4
                        if field1 = 10 then do
                                seconds=seconds+1
                                call Text(seconds, window,x,y)
                                end
                end
                call EndWindow(window)
        end
```

Listing 1: A script to illustrate the use of timeout events

As you can see, the WaitMsg() routine is potentially very powerful and, as well as the events listed in this month's boxout, it can also handle Boolean, proportional and string gadget operations, along with mouse movement, raw and ASCII character keycode handling, size verify message detection and a variety of other things.

Needless to say we haven't the space to deal with all of these use aspects, but you can find the full details in Jeff Glatt's official rx_intui library documentation.

This month's example will illustrate how timeout events can be used. These are particularly useful because they allow the WaitMsg() function to return after a certain amount of time without user activity (thus providing a way of returning from WaitMsg() on a regular basis).

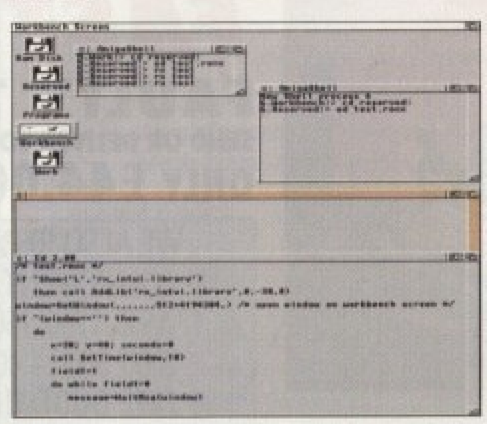
You can set the timeout value from 0 to 255 ticks using the rx_intui library's SetTime() function. There are approximately 10 ticks per second so a timeout value of 10, for example, allows the WaitMsg() routine to wait about one second for any user activity before it returns with a timeout message. This enables the event loop to act as a seconds counter and this is exactly what the script shown in listing 1 does. Each time a timeout message is received, a seconds count is incremented and the display updated using the Text() function.

As with last month's example, you can terminate the program by clicking on the close window system gadget. Timeout messages, incidentally, will only appear while the window is active and you'll be able to see this by selecting some other window while the script is running. The incrementing seconds value will stop increasing until the window is reselected again!

When you examine my code now you'll notice those magic numbers 512 and 4194304 that I've sneaked into the GetWindow() call this month. What do they mean? Tune in next month and you'll find out!

Flagname	Field 1 (Class)	Field 2	Field 3	Field 4
CLOSEWINDOW	0	state: 0=CANCEL, 1=OK		
GADGET	1	ID number	0=DOWN (SELECT) 1=UP (RELEASE)	Prop #step Text or on/off state
MENUPICK	2	MENU#	ITEM#	SUBITEM#
MOUSEBUTTON	3	Left DOWN=0, Left UP=1, Right DOWN=2, Right UP=3	x pixel pos	y pixel pos
MOUSEMOVE	4	x pixel pos	y pixel pos	
DISK	8	INSERTED= 0, REMOVED= 1		
ACTIVE	9	ACTIVEWINDOW=0, INACTIVE=1		
TIMEOUT	10			

Table 1: A few of the rx_intui library's WaitMsg() event handling facilities



The example script in action

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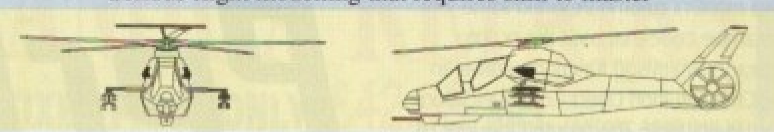
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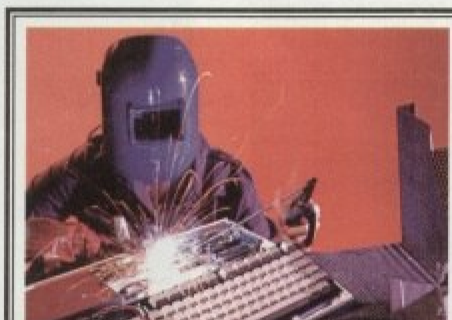
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Slip through the net

Phil South takes a look at the Delphi Internet Service

You don't have to tell me, I know what you're thinking. Does Phil need any more e-mail addresses? The answer is yes, I need as many as I can get, and there is a good reason for that. I'm a collector of e-mail addresses. I have a number so far, as you can see from the bottom of this page, but I can always do with some more.

Which is why I was so pleased that the Delphi Internet service from the US has started up in the UK. It's a system which specialises in Internet access, and although they are exclusively text based, the system does have a lot of things to recommend.

For a start the system is nice and fast, which all you Web heads will be pleased to hear. What you won't be quite so pleased to hear is that it has no Web access, so you'll have to stick with Demon (or whatever service you currently use to 'web out') for the moment. You may like to know that Delphi, in common with CompuServe, has started its own web pages, on:

http://www.delphi.com/

joining CompuServe which is of course on:

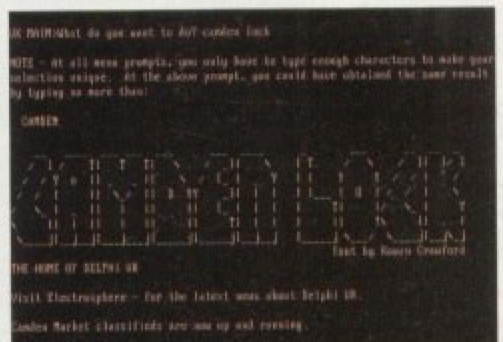
http://www.compuserve.com/

Both services are a little bit limited as I suspect they've rather rushed into the web thing for fear of being left behind.

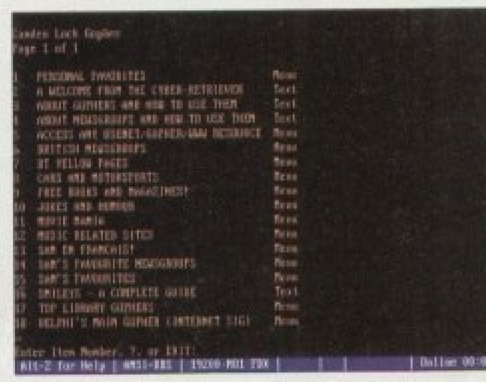
In any case, Delphi itself is rather nice, albeit text based. There are some GUI-based interfaces for the system, but these are PC based at the moment. It's about time we had some cool Amiga Off Line Readers for the likes of Delphi, CompuServe and co. All you coders out there take note. You could be on to a massive shareware fee if you do something really soon.

The system is based around textual menus, which means you have to type in the first few letters of a menu entry in order to access that part of the service. There's files to download, a section from the UK's loveable comms god Wavey Davey, there's a whole UK area called Camden Lock, and lots of UK-specific material, which is more than can be said of CompuServe, despite their protestations to the contrary.

There is also a link to the Delhi server in the US, which means access to all the facilities on their machine, which having been up and running much longer is full of much more stuff. It'll take a while for the UK to catch up, but until then you'll have to be satisified with access to the US version.







Some of the textual menus available on Delphi

What can you get on Delphi? Well, as its primary focus is on the Internet, the answer is you can get anything which is on the Internet. There is a lively community on Delphi already, as the take up on the service since it was launched by the Times has been really quite good.

There aren't a lot of files in the UK area, but until a lot of people start using the system over here and start uploading things to it, that's expected. There is a thriving Amiga section on both the UK and US servers, and of course you have access to all the Amiga Internet sites, gophers and WWW sites. The WWW interface is textual of course, but this is okay for most things.

Verdict

I like Delphi, and it offers a good range of services. I don't really like textual interfaces, but then as Mick Jagger said, you can't always get what you want.

The charges for Delphi are not too unreasonable, although you have to watch it as the costs will soon mount up if you do a lot of net surfing. The charges are £10 per month for four hours of free usage, plus £4 per hour after that.

Before you choose Delphi as your sole Internet provider, bear in mind that Demon and others provide full Internet connection direct to your machine for just £10 per month for unlimited usage.

If you can only afford one service, then you could do worse than use Delphi. It is a little easier to get up and running than a conventional dial-up connection, but it is limited in what it can show you, especially if you want to run any sexy windows client software, which as things stand at the moment you can't.

All things considered, I would use Delphi in preference to a big service like CompuServe, which for aimless browsing is far too expensive – unfortunate, as this is precisely what the Internet is good at, and where you can make the most interesting discoveries.



Letters and e-mail

First we have the exotically named Sharif Al-om who has this to say about his own on-line service: "Can you please put this info about this BBS in the next available issue of Amiga Computing."

Certainly. The FRONTIER BBS (0527) 597531 is on 24 hours a day, and the sysop is Matthew Recardo, with co-sysops Sharif and Daniel Rodent. The BBS has all mod cons including Echo-Mail etc. Join today to avoid disappointment.

Next we have Dave Earnshaw, who asks: "I read your recent comms article in Amiga Computing, and am trying to connect through to Internet for the first time.

I am sending from an IBM AS/400 midrange computer, using the Gateway between the IBM Information Network and the Internet network. I do not know much about the Internet, but understand that the Gateway from IIN will only allow file transfer.

"Could you please confirm that you have received this, I would be grateful for any interesting information you may have about the Internet and what I might do on it."

Here is my confirmation, and your e-mail access certainly seems to be working. Anyway, never mind this midrange IBM computer stuff, get to an Amiga dealer at once and check out the prices you can pick Amigas up for. If you're used to AS/400 machines, you'll love the Amiga's cool multitasking.

Write On!

If you have any hints and tips, any URLs you'd recommend, any software you've found particularly beneficial, then why not drop me a line:

Phil South, Comms Section
Amiga Computing, IDG Media
Media House, Adlington Park, Macclesfield SK10 4NP

or e-mail him at:

Demon	phil@snouty.demon.co.uk
CIX	snouty
The Direct Connection	snouty
CompuServe	100102,1500
Delphi	snouty@delphi.com
eWorld	snouty

Whither the Amiga video revolution?

What will happen to the Amiga video market when the Commodore buyout eventually happens. Gary Whiteley lays down the possibilities



You don't need me to tell you what a shambles the whole Commodore/ Amiga International/CEI/Samsung/Philips/ Hewlett-Packard/Uncle Tom Cobley and all MBO, liquidation, die-out, buy-out, whatever you want to call it has become.

Months after the initial announcement we still have few hard facts regarding the future of the Amiga as we know and love it. Whether a phoenix actually will rise from the ashes of this truly innovative computer now seems to be a secondary concern and I have to admit that, like many others, even I'm slowly having to contemplate the idea that sooner or later I'm going to have to forsake my favourite computer for a PC or a Mac.

This is not good news, neither for myself, for any prospective buyers, sellers and manufacturers of the Amiga line, or for the developers who dream up the products on which Amiga videographers have come to rely.

Thanks to the efforts of these developers – who gave us such innovatory video hardware as the Video Toaster and the Personal Animation Recorder – Amiga video has kept its edge and remained competitive with many of the bigger players. But for how much longer?

To echo the sentiments of Matt Black (Hex video DJ and one of a new breed of digital culture exponents), access to computer-based graphics and video tools can change the nature of art and television by redefining the boundaries of what is, and what is not, 'Art.'

Ten years ago, access to television was generally reserved for rich producers, along with limited patronage for those able to charm money out of top-heavy and underfunded organisations like the British Film Institute or the Arts Council of Great Britain.

Video equipment was big and costly and the Amiga hadn't even been released. Standard video formats included VHS, U-Matic and Betacam, and broadcast editing usually meant an expensive trip to a large, extravagantly-equipped facilities house.

How things have changed! Granted, us poor Brits don't have the range of public access television facilities enjoyed by our US counterparts, but many people are realising that this isn't necessarily a problem.

With quality video production equipment becoming ever more affordable, and with computers like the Amiga to feed it graphics, animation and sound, it is now possible for determined ordinary folks to teach themselves about the nature of audio-visual communication, to equip themselves to report on stories which would never be covered by the mainstream media and, most importantly, to provide some degree of opposition to the media giants who happily feed us pap on the grounds that 'this is what the public wants.

DISTRIBUTION

Now that the majority of the population have access to a video recorder, and more regions are being cabled up to provide local video and communications services, programmes can be distributed by means other than the broadcast airwaves.

The keepers of the nation's morals won't like it, and no doubt more legislation will be applied to try to keep such 'subversive' distribution in check, but unless they become Luddites and destroy the new technologies then there's no way that the moguls will be able to fully control the means of programme distribution any longer.

True, they'll still hold sway over the national airwaves, and keep pumping out their sanitised versions of world news and contentious national events such as the Poll tax riot or the recent trouble at the Criminal Justice Bill demonstrations, but as more and more people wake up to the fact that much of the mass media being pumped into their homes is either crap or doesn't tell the whole story, then they start to realise that the only way to redress the balance is to produce and distribute their own alternative views to an increasingly interested audience.

Which is where tools like the Amiga come in, providing us low-life with the means to produce our own material, to record and edit video, CDs and multimedia programmes which, although not always able to emulate the quality (and, by implication, the believability) of the broadcasters, can at least convey information which might otherwise remain uninvestigated. In short, the Amiga has been a significant contributor in redressing the balance of power in the communications stakes.

Unfortunately, we're now witnessing a moribund combination of legal representation, shareholder greed and company politics being applied to the remains of Commodore. A computer which appeared to have plenty of life in it six months ago is slowly being strangled to death. Whether this is through neglect, incompetence or sheer stupidity hardly seems to matter. The fact is that while the legal and corporate vultures continue fighting over the carcass, the Amiga is slowly, but surely, fizzling out. •

Changing sides

The video revolution once heralded by Newtek, and kickstarted so ably by the late Jay Miner, now appears to be transferring allegiance to other platforms. Heck, even the game players are starting to leave, turning to the more future-proof (though not necessarily more able) PC and Mac platforms.

Of course the Amiga isn't going to die overnight, but those of us who want to continue being part of that video revolution are eventually going to have to upgrade or replace our production tools, and right now it's very difficult to keep faith in the Amiga's future. Without firm assurances that we're on fairly safe ground, then the only alternative appears to be to jump ship and take our chances.

How to find me

Gary Whiteley can be e-mailed as drgaz@cix.compulink.co.uk.

In keeping with the law

This month Paul Overaa illustrates an easy way to check a Midi file for internal copyright information...

The other day I had a letter from someone asking how to tell whether a given Midi file is in the public domain or whether it is subject to any copyright or use restrictions. There are a great many companies providing Midi files nowadays and the simple answer is that files that are subject to copyright restrictions will usually come on a disk containing readme files that clearly state what the user can, and cannot do with the files provided.

Now that's fine providing the files come on the disk originally supplied. But what do you do if someone 'lifts" Midi files from various sources and puts them on another disk without the original readme files. Well Midi files themselves can also be provided with internal copyright notices but the trouble here is that most users never know that these notices exist, because sequencers in general do not provide the facilities to view this information. If you, as the inadvertent recipient of such a file, use or modify the sequence data you are (technically) just as guilty of copyright infringement as if you had stolen the files yourself.

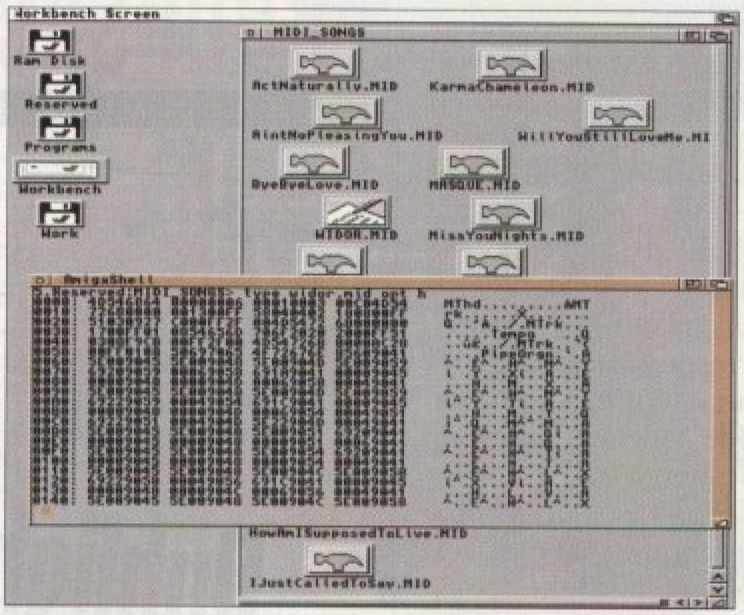
Luckily there is a simple way of identifying embedded copyright messages, providing you know what to look for. It involves using a Shell window to examine the internal contents of the file and, although this means that you need to know a little about the arrangements used to store data in a Midi file, it's not that difficult a job.

A Midi File, just like any other computer file, consists of a series of bytes. The Midi file standard specifies the interpretation and arrangement of those bytes and at the highest level these files consist of blocks of data called "chunks."

Each chunk consists of a four character identifier, a 32-bit number which specifies the byte-length of the data held in the chunk, followed by the data itself. In other words all chunks adopt this type of arrangement:

```
Chunk
4 bytes 4 bytes    4 bytes    chunk-size bytes
```

Only two types of chunks are currently defined:



AmigaDOS's TYPE command can be used to identify messages embedded in Midi files

Header chunks which have an "MThd" identifier, and track chunks which have an "MTrk" identifier. The "MThd" header chunk is always the first chunk in a Midi file while the Midi data itself is packed into the units known as track chunks.

It is in the first track chunk that any embedded copyright information will be found. The details will be stored in something called a Meta event and the Midi file standard actually defines a whole collection of such events (see table 1 for a few examples).

All Meta events have the same sort of format – they start with an FF hex character as the primary event identifier and this is followed by an event "type" field, a byte count, and finally the data itself:

```
Meta Event
```

The meta-event type field is a 1 byte value between 0 and 127 and the length field is stored in a rather strange variable length format that will not concern us. In a sense, the type field byte performs much the same job as a Midi status byte but it is of course being used to classify a Meta event type not a Midi message type.

So, what exactly must you do to identify an internally stored Midi file copyright message? Just open a shell window and type TYPE followed by the path/filename of the file you wish to examine and OPT H. For example, to examine a file called drumtrack.mid on a disk in drive df0: you would use this command:

```
1>TYPE DF0:DRUMTRACK.MID OPT H
```

When you hit Return, the hex/ASCII contents of the file will be displayed. The first four bytes will be "MThd" which signifies the start of the header track. Shortly after this you'll see the first (or perhaps the only) MTrk track chunk identifier characters. Skip over the next four bytes (the chunk size) and if the next two bytes are FF 02 then the file does indeed contain an embedded copyright message.

From the ASCII form of the display you'll be able to see the information it contains. It may be a text message, some figures that represent a serial number, or perhaps something completely unintelligible (some suppliers add encrypted copyright messages). Whatever you find you will at least know one thing – the file will undoubtedly have some restrictions on use!

Description	Type(Hex)	Length	Details
Text Event	01	variable	Text describing anything at all
Copyright Notice	02	variable	Should be the first event in the first track
Sequence or track name	03	variable	Another ASCII text event
Set Tempo	51	3	A 24-bit number which represents microseconds per quarter note. These events should really only occur at positions where real Midi clocks would be located.
Time Signature	58	4	The time signature is expressed as four numbers NN DD CC and BB. NN is the time signature numerator, DD is the denominator expressed as a power of 2, CC is the number of Midi clocks in a metronome click, and BB represents the number of 32nd notes in a Midi quarter note.
Sequencer Specific	7F	variable	This event allows sequencers to include their own sequencer specific info. Manufacturers who use such events are supposed to publish the formats so that others can interpret the data. In practice few do!

Table 1: Some common Midi file Meta event formats



Tailor made

Ben Pointer tries his hand at creating imaginative and colourful sleeves for all your video beauties



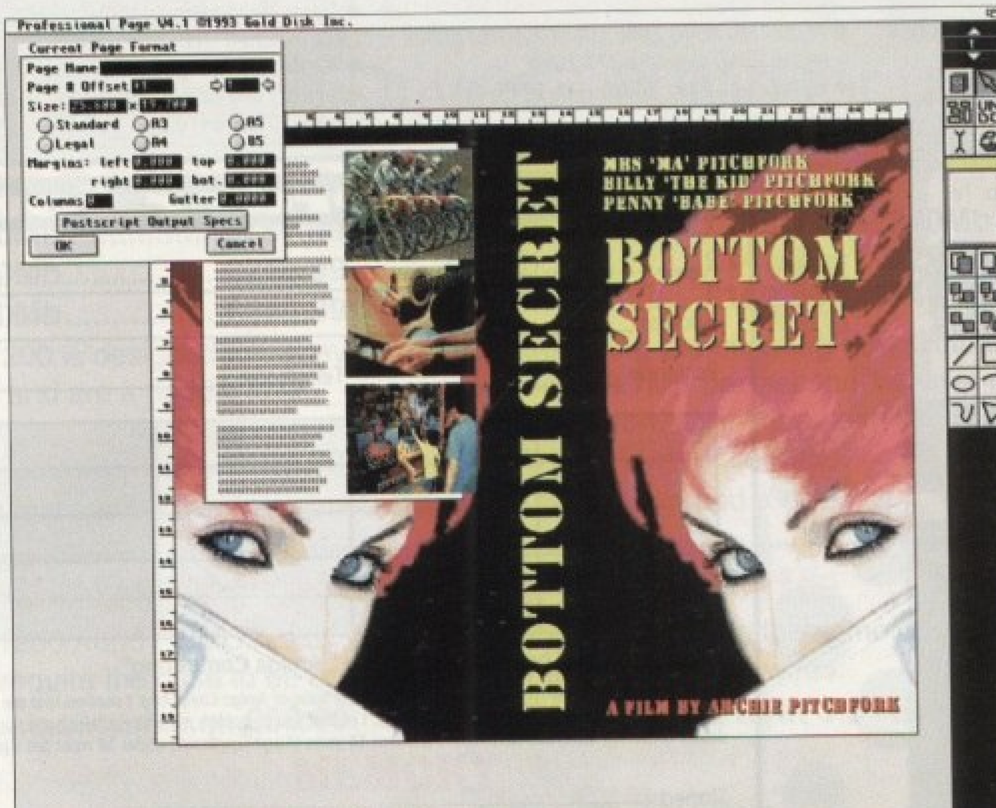
Some of the best fun the hobbyist desktop publisher can have is designing sleeves for video cassette cases. Whether it's a home movie, wedding bash or just something taped from TV, designing a sleeve for the video is a great way to hone your design skills and practice at being creative.

So what do you need? At the very least you need some software to design the sleeve with. It doesn't have to be a powerful desktop publishing package, one of the graphics-based word processors will do, but it would help if your software has a landscape printing mode so that you can print the results sideways on A4 paper.

To help you be creative with your sleeve design, a painting program will come in useful and/or an image processing package. If you've got a video framegrabber, so much the better, but you can still do a lot with the design without using frames from the video itself.

A printer, naturally, is compulsory. Or at least access to a printer, preferably a colour one, and preferably inkjet rather than a ribbon printer because the results will look that much better. If you prefer to use a mono printer, then you can always print on to coloured paper or use different coloured inks/ribbons to add some 'spot' colour to your design.

Video cassette cases are a fairly standard size, but the space under the plastic cover does vary very slightly between brands. Generally though, your design has to fit on a piece of paper 25.6cm wide and 19.7cm high, give or take a couple of millimetres.



The classic video sleeve design has a striking image on the front and key scenes from the video on the back, with a few words to tempt the buyer. Don't feel you must copy this 'convention'. Be imaginative. Be different. Get noticed

PRINTING

That's why you need a landscape printing feature, because A4 paper is only 21cm wide. But as it is 29.7cm high, a page size of 25.6cm by 19.7cm rotated by 90 degrees will fit on to it nicely.

If your WP or DTP software cannot do landscape printing then you will have to do the sleeve in two bits. Actually, there are three 'bits' to the design – the front, back and the spine.

The front and back are both 11.3cm wide and the spine is 3cm wide. But rather than do the spine as a separate bit it is more convenient to do the front and the spine as one 14.3cm wide bit, and the back (11.3cm) separately. If you leave a 1cm flap to the left of the spine, when you cut out the front-and-spine the back can be glued to that flap. When the sleeve is under the plastic the join shouldn't be noticeable unless you are specifically looking for it. The classic design technique for videos is to have a simple but striking image on the front, something that immediately attracts the eye, and on the back use some key scenes from the video to further whet the prospective buyer's appetite.

But you are not intending to sell your video, so don't let convention cramp your style. It feels right to have a side that is obviously the front and a side that is obviously the back, but there is no rule that says you cannot have two fronts, or two backs come to that. The idea is to have fun and come up with a distinctive and unique design.

If you own a high quality colour printer like the Epson Stylus Colour, a colour Hewlett-Packard DeskJet or colour Canon bubble jet, you can even have a go at photorealism, provided you have a video framegrabber, image processing software (Photogenics, ADPro, ImageFX, Brilliance, Personal Paint) and high quality printer software (Studio V2).

Frames grabbed from your video may be low contrast and perhaps a tad 'noisy', so they'll need brightening and cleaning up a little. The Amiga's standard colour printing features are a bit ropy to say the least, so to get the best possible printouts from the high quality colour printer you have invested in, special printer software will be needed – you've spent a few hundred pounds on the printer so it seems a shame to put up with anything less than the best for the sake of an extra £40-£50.

But don't feel you must go for photorealism. For instance there's nothing to stop you grabbing a frame and posterising it, or pixelising it, or smearing it, or carving it up into squares and mixing them up... or whatever.

Photorealistic output isn't always the best idea when mucking about like this – often it'll look more striking with just four or eight colours. Indeed, look around you, there are many film posters and video sleeves that use just two colours and still positively force themselves down your eye sockets.

KNOCKOUT

Mono printer owners should think about this. With enough imagination, black ink on coloured paper, perhaps using halftones here and there, can easily knock the spots of a photorealistic design.

Something else to consider is the reverse of the sleeve. You've got a lot of space there to document the video in more detail, or provide any special instructions (perhaps for a tutorial type video), anything you like really. Keep in mind that the reverse of the sleeve will be viewed as one page rather than three bits like the other side.

Think on this and try to use it to your advantage. For instance, there's absolutely no reason why you cannot print from one side, right across the back of the spine on to the other side. Nor does it have to be landscape; to read the reverse the sleeve has to be removed from the video case, so you can use any orientation you desire.

Star of the show

Tell you what, though. Beware who you show your sleeves to because before you know it you'll have friends, neighbours and family all clambering for you to design sleeves for their videos. Hey, if you're not very careful you'll never have to put your hand in your own pocket to buy ink refills and high quality paper again. Who knows, you might even be forced into starting your own business.

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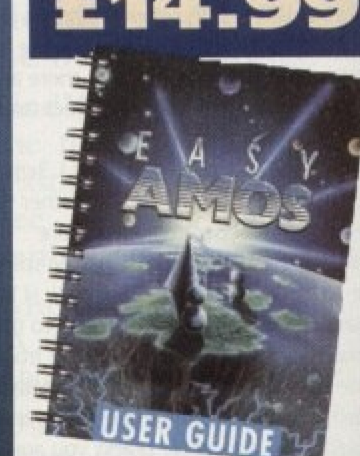
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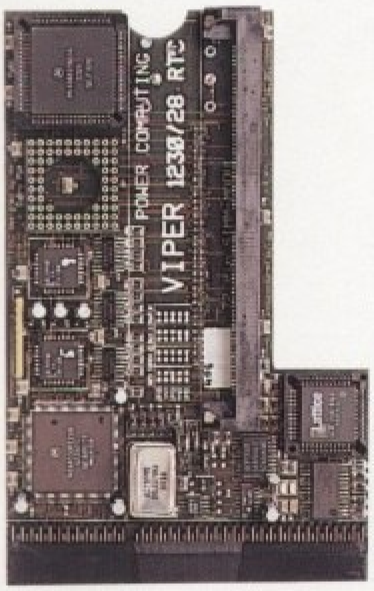
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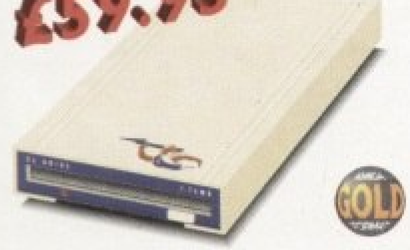
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